Brain teasers

A collection of Mind benders

By

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Senator CJ Langenhoven while in Parliament once said the following or something to that effect.

CJ Langenhoven: "Half of the members here are baboons."

Speaker: "The member for Oudtshoorn will take that back."

CJ Langenhoven: "I take it back. Half of the members here are not baboons."

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1.0 Introduction

How far can you run into a forest? Only halfway, because when you pass your halfway mark you start running out of the forest. It is puzzles like this and many more that is contained in this book.

The book also contains logic puzzles, brainteasers and riddles that have been accumulated over the years from books, via the Internet and from friends and strangers. In most of the cases I have tried to write stories around the puzzles. The material will stimulate the lazy mind and give the reader a sense of self-satisfaction after the puzzle is solved.

Logic puzzles, brainteasers and riddles have intrigued people over centuries. The puzzles are both difficult and easy at the same time. Difficult, because most people give up too easily and easy as in when the answer is told to you and the answer seems so obvious.

People who give up after a few minutes have not really tried. If you cannot solve the puzzle immediately then put it in a safe corner of your mind and tackle it whenever you have a free moment to yourself. You will be surprised at all the possible solutions your mind can produce.

The answers to the puzzles are all given after the end of the last puzzle. The answers are those of the author and some may not be the easiest or the shortest route, but then the author is also quite ordinary in his reasoning.
If you really cannot solve the puzzle, then try the hint if a hint is given. The hints make the puzzles really easy.

It is quite impossible to give thanks to all the original inventors of these mind games, because in most if not all of the cases the puzzles were passed from person to person and changes were introduced along the way.

If our readers get really frustrated in trying to solve the puzzles, then throw the book away, rest a month and then go and buy another copy.

2.0 THE FARMER

Farmer Tinie who lived at the edge of the river once wanted to take a buck, a lion and a crate of apples across the river. He had a small boat that could only accommodate two things at a time. Himself and say the crate of apples or himself and the buck. There was however a little problem. If he took the crate of apples, the lion would eat the buck. If he took the lion, the buck would eat the apples. How did he manage to get the two animals and apples to the other side of the river?

3.0 THE TRAVELLER

Dirk once travelled in his car when he reached a forked junction. The sign to tell him which way to go was stolen and thus he was stalled. He remembered that a guy once told him in a pub about two brothers who lived at that junction. The one brother always lied and the other one always told the truth. They however only allowed you one question to be asked to one of them. They were also identical twins so that one never knew which brother lied or which told the truth.
There you have it. Say the sign would have told you the way to Durban and Cape Town. What would your one question have been to one of the brothers to find your way to Durban if you had been Dirk?

4.0 In the desert

Jessie and Johan were once stranded in a desert. They had a container of eight litres containing eight litres of water. They also had two empty containers of five and three litres. They wanted to split the eight litres of water so that each had four litres of water.
How would you go about to share the water by pouring it using the three containers so that you would end with four litres in the eight litres container and four litres in the five litre container?

8L   5L   3L
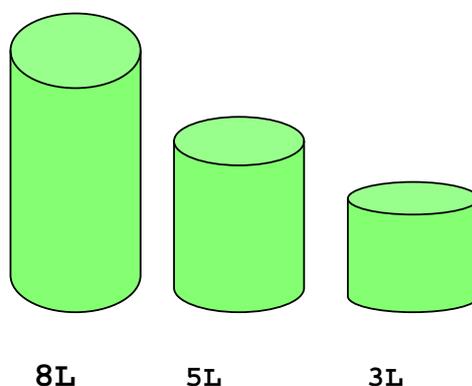
5.0 Gold

Suppose you have nine balls. Eight of them are made out of lead and one of them is made out of gold, but all of them are painted yellow. It is also impossible by weighing them in you hands to distinguish which ball is made out of gold. However you have a scale that allows you to put weights on both sides and by balancing them you could then find out which one is heavier and thus made out of gold.
How would you find the gold ball by just weighting twice? You can put as many balls on the scale as you like.

Put the numbers 1,2,3,4,5,6,7,8,9 in the squares shown so that each row added up, each column added up and each diagonal added up would show the same result.

7.0 POISON

Two guys Bill and Ted each went to the same pub and each ordered a scotch on the rocks. Each drink contained poison, but Bill and Ted did not know it. Bill quickly downed his drink and stayed for an hour and talked, before he went home. Ted took a long time to drink his drink and on his way home he died. Nothing happened to Bill and he stayed alive.
Why did Ted die and Bill stayed alive?

8.0 MURDER

A married couple was speeding towards town in their sedan motor car when they ran out of petrol. The man made sure that all the windows were closed and that the doors were locked. Then he went for petrol. When he came back there was a stranger in the car and his wife was dead, but the windows were still closed and the doors still locked.
What happened?
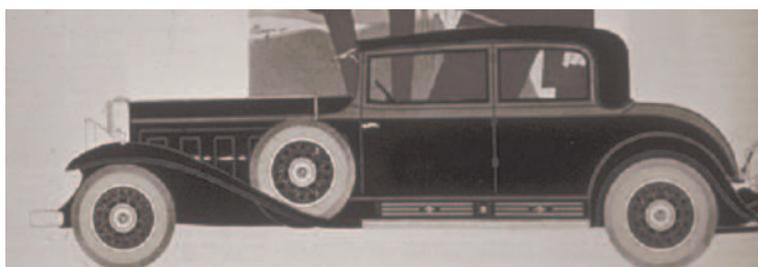
Andre was sleeping in a chair on the top story of a high
building. When he awoke it was dark. He looked through the
window towards the sea where a lot of people were drowning in
the high waters. He held his head, went to his desk, took out
his pistol and shot himself.
Why did he shoot himself?

10.0 OPEN WINDOWS

The scene is a room with open windows. The wind is blowing the
curtains in front of the windows every now and then over a table
that stands near the windows. On the floor lie quite a few
pieces of broken glass, a certain amount of water and two dead
bodies.
What happened here?

11.0 THE ELEVATOR

A man lived on the 23rd floor of a building. Every morning he
pushed the button for the ground floor to go to work. Every
afternoon he pushed the button for the 15th floor and after
arrival on that floor he walked up the rest of the floors to his
apartment. He did not do this for exercise.
Why did he do this?

12.0 GLASS OF WATER

A man went to a bar and asked for a glass of water. The barman
gave him a glass of water and watched him drink it. After a
while he took out his pistol and threatened to shoot the man.
The man looked up with fear in his eyes, but a few moments later
he smiled, thanked the barman and left the bar.
What happened here?

13.0 HATS

Three people were on death row. They were given the chance to
play a game in which one of them would be freed if he won. They
were put in a room with no windows or mirrors. Six small hats
were shown to the participants. Three red and three white hats.
They were told that a hat would be placed on each of their heads
in the dark so that they would not be able to see the hat on
their own heads. The light would then be switched on and if they
see a red hat on one of the other people's heads they had to
raise their hands. The person who first guessed what the colour
of his hat is, would go free, but if he was wrong, he would be

killed on the spot.

Each man received a red hat on his head and the white hats were taken out of the room. The light was then switched on and immediately all three people in the room raised their hands.

After five minutes one man said that he had a red hat on his head. He was freed and the other two people were executed.
How did he know that he was wearing a red hat?
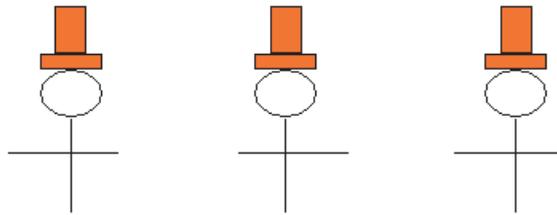
14.0 Man in love

A man lived on the edge of a great lake in the North of Alaska. He was interested in a nice lady living at the opposite side of the lake. He had no boat to reach the lady and the lake was also surrounded by quicksand. He therefore could not reach the lady by land. He also could not swim.
How did he reach the lady in the end?
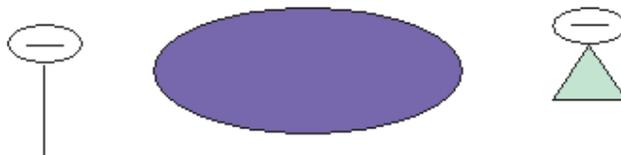
15.0 Apples in the basket

A man has a basket of apples. The number of apples in the basket is 50 plus half of the total number of the apples. How many

apples are in the basket?

16.0 The Horse salesman

A man went to market with his horses to sell them all.
He sold half of his horses to Joe and gave Joe half a horse as a present.
Next he sold half of the horses he had left after the transaction with Joe to Ben and as a present he gave Ben half a horse.

Lastly he sold half of the horses he had left after the transaction with Ben to John and as a present gave John half a horse. He had no horses left and went home. How many horses did he bring to the market?

17.0 The Barber

In a certain town a barber shaves all the people who do not shave themselves. Does the barber shave himself?

18.0 The Race

A certain tortoise and the fastest man in the world decided to race each other over 100 metres. They decided for fairness to give the tortoise a head start of a few metres. They were started off and away they went. When the man reached the starting point of the tortoise, the tortoise had moved on a bit to point B. When the man reached point B the tortoise again had moved on a bit to point C and so on and so on. How would the man ever be able to catch up with the tortoise and be able to win the race?

19.0 Dining out

Three guys went out to dinner. Their meal cost them 10 rand each. So each of them gave the waiter 10 rand. The waiter decided to give them five rand discount. He took two rand as a tip from the five rand and gave them each one rand back. The meal has therefore cost them 9*3 + 2 = 29 rand. What happened to the other rand?

20.0 Fair share

Mike, John and Charles inherited their father's estate that

consisted of eleven sheep. The will stated that they were to
have 1/2, 1/4 and 1/6 respectively. They did not know how to
implement the will, so they consulted Farmer Brains. He told
them he could solve their problem. He added one of his own sheep
to the 11 sheep and gave each son his share. He was left with
his own sheep. Which of the sons got more than his share?

21.0 Crossing the river

Two men weighing 100 kg each and their two sons weighing 50 kg
each had to cross a river. They had a boat to their convenience,
but this boat could handle only 100 kg at a time. How did they
cross the river?

22.0 Goblet of gold

One of seven goblets A to G standing in a row is made of solid
gold. Count 1000 starting at A to G and back to A and back to G
and so forth. (A, B, C, D, E, F, G, F, E, D, C, B, A, B, C....)
When finished that goblet you counted last will be the one made
of gold. Which one is it?
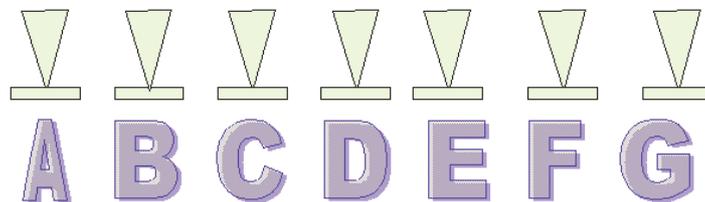
23.0 Grandpa's age

Grandpa whose age was somewhere between fifty and seventy, was
fond of bragging in the pub at a certain age that each of his
sons had as many sons as brothers. He said that combined, the
number of his sons and grandsons was precisely his age. How old
was Grandpa at that stage?

24.0 The cricket match

The banker Bill Money saved the game by scoring 40 runs in the
cricket game.
He raised his batting average from 27 to 28. How many runs would

he have needed to raise his batting average to 30?

25.0 The hungry men

Three men arrived tired and hungry at a certain inn. The innkeeper offered them a meal of cooked potatoes. When he brought the dish in all the men were asleep. After a while one woke up and ate a third of the potatoes and went back to sleep. The next man woke up after a while and also ate a third of the potatoes and went back to sleep. The last man woke up after a while and ate a third of the potatoes and went back to sleep. The next morning the innkeeper came to take the tray away and saw that there were eight potatoes left. How many potatoes did he cook for them?

26.0 Mixing Milk and Water

We have two containers containing equal quantities of water and milk. We take a teaspoonful of milk from the milk container and put it in the container of water. Next we mix this thoroughly. We then take a teaspoonful from the water container and pour it into the milk container. Now, is there more milk in the water than water in the milk, or is it the other way around?

27.0 The three brides

Three brides and their husbands wanted to cross a river. The boat they had could only take two persons at a time. How were they to cross the river if at any stage no bride was to be left alone with other men if her husband was not present.

28.0 Hanging the culprit

On a remote island the king passed a law that people who were to be executed could choose how they wanted to be killed. The method was that the condemned could make a statement. If the statement was true, the person was to be hanged. If the statement was false, the person was to be beheaded. One bright chap escaped the noose and the sword with his statement. What was his statement?
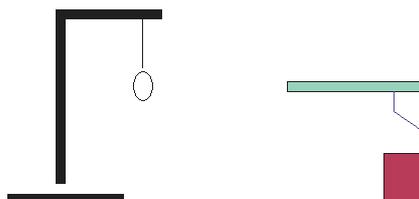
Seven dwarfs are sitting at a round table. Each one has a certain amount of milk in his glass. Going clockwise each one pours all his milk in equal shares into the other six dwarfs'

glasses. After the seventh dwarf has finished, everyone has the same amount in their glasses as they have started out with in the beginning. How much milk does each dwarf have in the beginning if the total amount of milk they have, is 3 litres?

30.0 Observing the planets

In a certain star system there are an uneven number of planets. On each planet there is an astronomer who watches the planet nearest to him and only that planet. All distances between the planets are different.

Prove that one planet is not being watched!
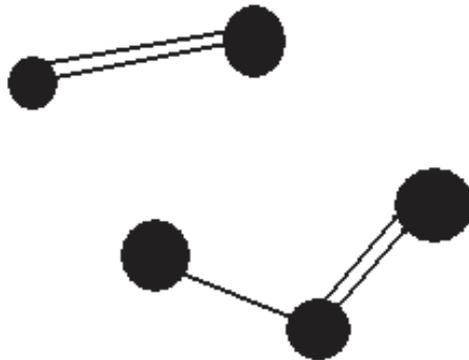
31.0 ANOTHER CAR STORY

A man was found dead in his car with a bullet wound in his head. There was no weapon in his car and no powder marks were found on his person. He had no reason for suicide. His windows were

closed, the car's doors all locked and the keys were in the ignition.
How was he murdered?

32.0 Triangles

Arrange six sticks or matches so that the result is four equal equilateral triangles?

33.0 The Assistant

Joe works as an assistant at the butcher's shop. He is 6 feet tall and he wears size thirteen shoes. Each day he drinks 5 litres of milk and steals 2 kilo's of chopped meat. He has a wife, 2 kids and drives a Mini. What does he weigh?

34.0 Time nine minutes

Time nine minutes using a 4 minute and a 7 minute hour glass?

7min   4min
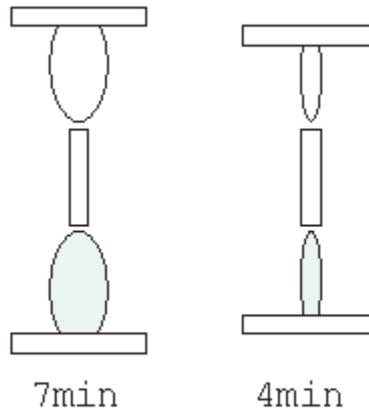
35.0 The missing coin

You have 2 coins worth seventy cents. One coin is not a fifty-cent coin. How can this be?
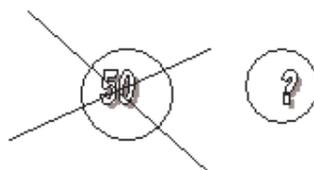
The coins currently in circulation are 1c, 2c, 5c, 10c, 20c, 50c, R1, R2 and R5 coins.

36.0 The three light switches

John bought a house with a basement. In the basement are three light switches. These three switches control the three lights in the room above. The switches are all in the off position.

How does John determine which switch controls which light by visiting the basement only once?

You may move any combination of the switches.
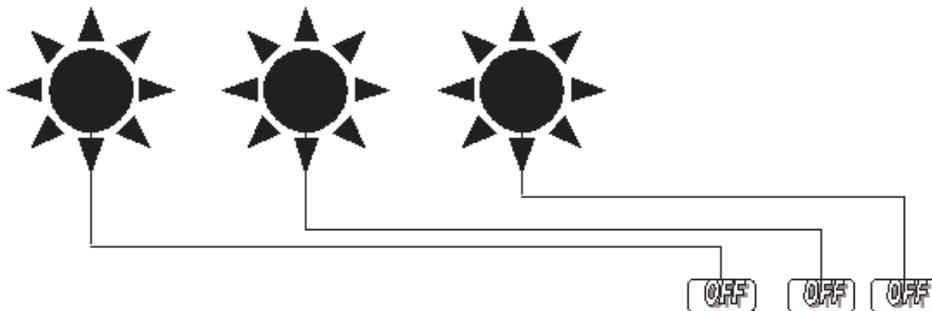
37.0 Reduce the boxes

Reduce the five equal boxes made out of matches to four equal boxes by moving 2 matches. The sizes of the boxes will stay the same.
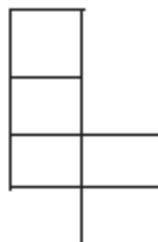
38.0 What comes next

Here is a sequence: O T T F F S S E N T ?

What is the next letter?

39.0 Plant season

Farmer Brown went to town and bought ten trees.
He went home and planted them in 5 rows with four trees in each
row. How did he do it?

40.0 The shopkeeper's profit

Shopkeeper Furs who owned a pet shop bought a batch hamsters at
R2 each. He also bought half as much birds as he bought hamsters
at R1 each. He sold each pet for its buying price plus ten
percent on that. When he had seven pets left of his original
purchase of hamsters and birds, he realised that he had made his
money back. The seven remaining pets would therefore be pure
profit. What was his profit?

41.0 The Cook's dilemma

Cook Flour has a jug of oil. He wants to measure 4 ounces of oil
for the delicate dish 'Oil the ole fish'. He only has two
containers to measure with. A five and a three-ounce empty
container.

How does he do it?
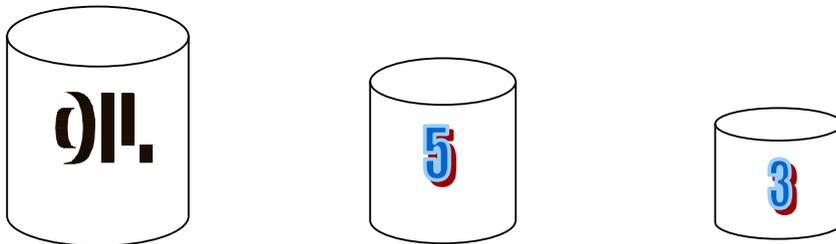
42.0 Amoebas in jars

Little Joe went out to hunt and came back with two jars.
In jar one he had one amoeba. In jar two he had two amoebas.
Amoebas have the tendency to multiply by dividing.
If an amoeba wants to have children it just splits into two
amoebas.

Now the amoebas in little Joe's jars thought they were going to
die. They therefore thought if they were many some of them might
survive. They therefore started to multiply at the rate of each
amoeba becoming two amoebas every three minutes.

It took the original two amoebas in jar two three hours to fill
the jar. How long did it take the amoeba in jar one to fill the
jar?
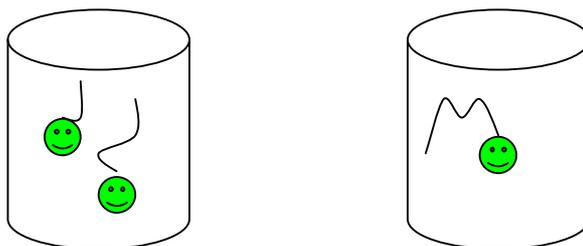
43.0 Windy flight

Most of his days the pilot Birdmacfly has calm non-windy days for his round trip from Nowhere to Somewhere. Some days he has a steady wind blowing from Nowhere to Somewhere.

Do you think his round trips will take a shorter or longer time if he has a windy day? Assume the engine speed always stays the same.

44.0 Twenty minutes earlier

Mr. Penpusher lives in Smalltown a small town on the outskirts of a big city Infinitely.

Every day his wife takes him to the railway station in Smalltown by car. He then takes the train to Infinitely.

Every afternoon he comes back by train and his wife picks him up and takes him home.

One day his pen ran dry and he went home early. He arrived on the station in Smalltown an hour earlier than usual. He decided to walk until his wife picked him up. She left home at her usual time to be at the station at the usual time. On her way she saw him walking. She stopped, picked him up and returned home. As it turned out, he was home twenty minutes earlier.

How many minutes did he walk?

45.0 A question of weights

Mr. Flour recently bought a balancing scale for his shop. On the one side of the scale you put the item you want to weigh and one the other side you put your weights. The heaviest item in his shop is 40 kg. What is the smallest number of weights he would need to measure from one to 40 kg? What are they?
You may put weights on the item side as well.
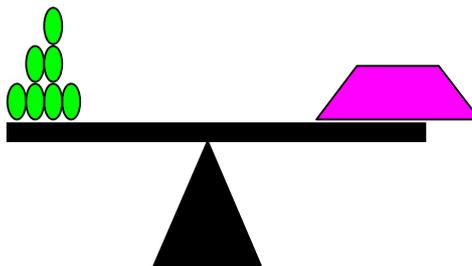
46.0 The wrong labels

Three boxes had fruit in them. One box contained lemons, one box contained oranges and a third box contained lemons and oranges. The boxes all had labels (lemons, oranges and lemons and oranges) describing what their contents were. However no label was describing the boxes contents correctly. For example the oranges label was fixed to the box containing lemons.

You are allowed to open a box, take out one fruit and examine it. If you can deduct from your action which fruit are in which box, fine. If not, open a different box or the same box and repeat the procedure.
You are not allowed to peak into the boxes.

What is the minimum number of fruit you have to examine before you can tell which box is which?

47.0 The lost money

Mr. Rich forgot R100 on his desk. The next day he could not find it anywhere. The maid told him she had seen it and put it underneath his diary lying on his desk. The butler told him that he had seen what the maid had done and had put it between pages 35 and 36 of the diary. Despite what Mr. Rich was told, the R100 was nowhere to be found.

Who stole the R100?

48.0 At the movies

One hundred and twenty people went to see a movie in 1960. The men paid R5 each. The women paid R2 each and the children paid 10 cents each. All together they paid R120. How many men saw the movie, how many women saw it and how many children went to see the movie?

49.0 Heads and feet

Farmer Feathermilk farmed with big birds and cows.
One morning he asked his workers how many birds and cows he had. The one worker told him he counted 100 feet that morning. The other one told him he counted 30 heads that morning.

How many cows and how many birds does our farmer have on his farm?

50.0 Earth's diameter

Crazy Pete a mad scientist decided to surround the earth with a rope. He knew that the circumference of the earth is 40 000 km. He went to a shop and bought 40 000 km of rope. He fastened the one end and started to walk. He walked day and night dragging the rope behind him. At the dawn of the 167th day he again reached the end of the rope he had fastened.

Much to his dismay he had 3 metres of rope too much. The shopkeeper had measured incorrectly. He decided he was not going to cut the excess off, but suspend the rope evenly above the ground to take up the slack. How far above the ground would the rope be?

51.0 The Dancers

Seven dancers lose 20 kg in 8 hours. The particular night they dance for four hours. How many extra dancers are needed if the total weight lost must still be 20 kg and the new dancers only lose weight half as fast as the regular dancers?

52.0 The Camper

Mr. Longlegs went on a hike. He set up camp and went to sleep. The next day he walked one kilometre due South, one kilometre due West and one kilometre due North. Much to his surprise he was back at his campsite. Where was his campsite?

53.0 Who stole the cookie?

Someone stole the last cookie out of the cookie jar. Ann said that Harry stole the cookie. Harry said that the culprit was Fred. Lisa denied stealing the cookie. Fred said that Harry was a liar. Only one statement is correct. All the others are false. Who stole the cookie and who told the truth?
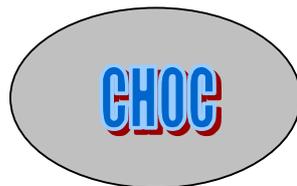
54.0 The Clock

Henry does not own a watch, but he does have a nice grandfather clock. The only problem is that Henry sometimes forgets to wind his clock. He always solves the problem by visiting his sister. When he goes home after the visit, he sets his clock to the correct time. How does he do it, if his sister stays some unknown distance from his place?
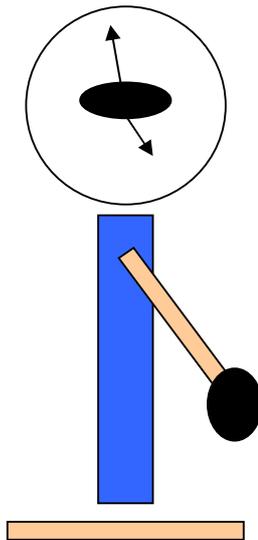
55.0 The Factory

A certain factory decided to reward the workers with a bonus at the end of the year. All together the factory had 350 workers.

The men were to be rewarded with R10 each and the women with R8.15 each. Some of the men decided not to accept the money. All the women accepted the offer. The total paid out was not dependant on the number of men accepting the offer. How much was paid out to the women?

56 The six gallon container

King Ben received a six gallons container made of gold. He was not sure that the container could indeed be filled with six

gallons. He had containers of nine and four gallons and lots of water. How did he determine the truth?

57 The woman and the taxman

A taxman came to Lisa's house and enquired about her three children's ages for tax purposes. She told him that the product of her three children's ages was 36 and that the address of her neighbour was the sum of their ages. The taxman went over to the neighbour. He came back telling her, he needed more information.

She told him that she could not stay and chat, because her eldest was asleep upstairs. The taxman thanked her and left, knowing at last the ages of her three children. What are the children's ages?

58.0 The run away prisoner

Jack-the-knife escaped from prison. He was walking along on a country road. After about 6 hours walk he saw a police car coming towards him at a high speed.

Jack looked behind him and then in front to the police car. He then started running towards the police car for a short distance. He then made his escape into the countryside's thick bushes alongside the road. What happened here?

59.0 The Well

A little monkey fell into a thirty metre deep well. Each day he climbed three metres and fell back two metres. On which day did he escapes his predicament?

60.0 Cheating province

In a certain country a king ruled over ten provinces. Each year they paid taxes to the amount of ten bars of gold each.
Each bar weighed in at 1kg.

The king heard from a certain source that one of his provinces cheated and only gave him 10 bars, each weighing 0,9kg.

The king's engineer invented a device that could weigh a collection of things. It even had a digital display. For instance if the king have weighed himself, he would have seen that he weighed 250,4kg. The king was fat indeed.

Now like all invented things, this invention had a drawback as well. It could be used, but only once.

How did the king manage to find the cheating province by using the device only once?

61.0 One hundred Gems

When Ali Baba entered the cave, he saw 100 gems neatly packed in a row. He touched all of them to make certain they were real. As it turned out, all of them were real.

He was standing there when 100 evil witches came into the cave. The first witch cursed each gem. The second witch waited for the first witch to finish and then she cursed every second gem. The third witch cursed every third gem. This went on until the last witch cursed the hundredth gem only.

When a gem was cursed, it became poisonous and touching it would be fatal.

When a cursed gem was cursed, it lost its curse and became quite harmless.

Which gems could Ali Baba take with him?

62.0 Buried Treasure

One-Leg the pirate buried all his treasure on a desert island. He died of food poisoning before he could go back to claim his treasure. Just before he died he gave his cook a map of the buried treasure.

The cook Dirty-Hands immediately went to the island.
On the map were drawings of two trees marked A and B and a fountain.

The instructions read as follows.

1. Find the fountain.
2. From the fountain walk towards the first tree A while counting your steps.
3. After reaching the tree turn 90 degrees to your left and walk the steps you have counted from the fountain to the tree. Mark this spot.
4. From the fountain walk towards the second tree B while counting your steps.
5. After reaching the tree turn 90 degrees to your right and walk the steps you have counted from the fountain to the tree.
6. Mark this spot.
7. Draw a line between the two marks.

8. The treasure is buried halfway between the two marks on the
   line.
Poor old Dirty-Hands. When he reached the island, the trees were
still there, but the fountain was nowhere to be found.
Is it still possible for him to retrieve the treasure?

63.0 Dirt in hole

How much dirt is in a round hole 6 metres deep and 2 metres in
diameter?

64.0 Racing cars

A BMW leaves Pretoria for Cape Town at 100km/h. Three hours
later a Ford leaves Cape Town for Pretoria at 130km/h. The
distance between Cape Town and Pretoria is 1450km.
When the cars meet, which car is nearest to Cape Town?
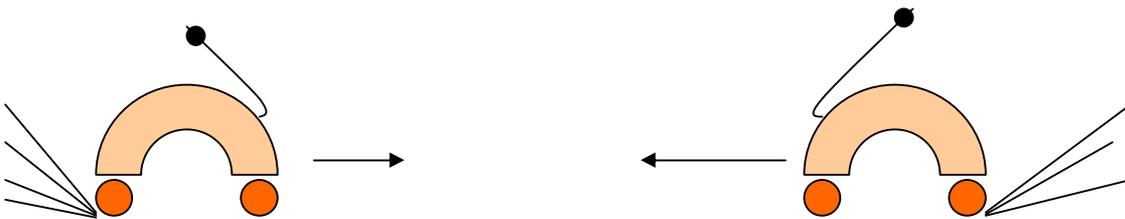
65.0 The boxing match

Two boxers were scheduled for a 12 round boxing match.
After six rounds one boxer was knocked out, but no man had swung
a punch. The boxing match was not a Kick boxing event. How is
this possible?

66.0 Florist Free

Florist Free had a small shop in a busy mall. He sold only three
types of flowers namely Roses, Tulips and Carnations.
One day he remarked to his wife that all his flowers were roses
except two and that all his flowers were tulips except two and
that all his flowers were carnations except two.

How many flowers were in the shop?

67.0 The Cheap box
Mr. Dirty-Money bought himself a camera. The camera came with a
cheap box. The camera and the box cost R100. The camera also
cost R80 more than the box. What was the cost of the box?

68.0 Torn up Message
Prof. Nerdy left a message for his wife at home. When he left,

he accidentally tore up the message into 4 pieces as shown below.

WCHS   IOOO

LMMO   LEEN

What was the message?

69.0 Four men and a flashlight

It was wartime and four men desperately needed to cross a bridge. It was night and they only had one flashlight with them. The bridge was booby-trapped and only two or less could cross at any time. The flashlight was needed at all crossings of the bridge, either by one or a maximum of two men.
They only had seventeen minutes to cross the bridge.
Tim would take ten minutes to cross the bridge.
Fred would take five minutes to cross the bridge.
Tweety would take two minutes to cross and Obi one minute to cross the bridge.
A pair of men crossing must walk together at the slower man's pace.
How did they manage to cross the bridge in time?
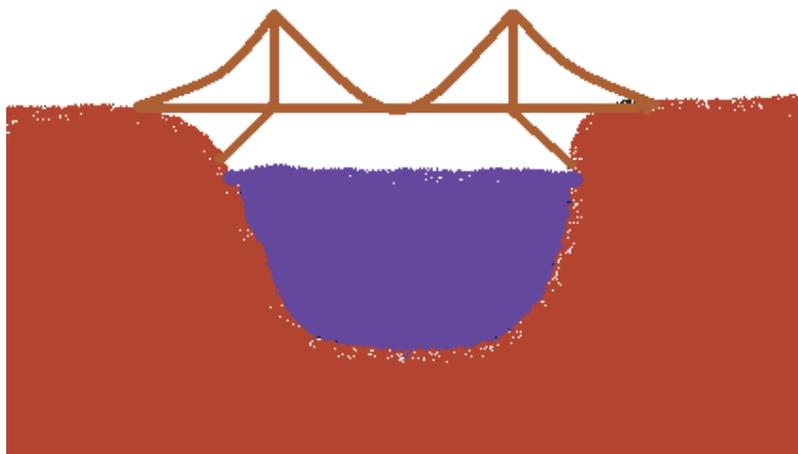
70.0 The rich Arab

Some sources said that Ali had 100 or even more camels.
Other sources said that Ali had less than 100 camels.
I think Ali had at least one camel.
If only one of these statements is true, how many camels did Ali own?

71.0 Breaking the record

Piston vann Torque the racing driver wanted to break the speed record of the 1km oval track near Bloemfontein. The current record was 120km/h for two laps. The speed is measured as total distance divided by total time elapsed.

His average speed for the first lap was 60km/h because of fuel pump trouble. How fast would he have to go on the second lap to break the record?

72.0 Selling Bibles

Bill Price was a Bible seller way back in the 1950's. He travelled all over the world spreading the good Faith. One day he paddled down the great Congo River and came upon a local tribe. He did his business of selling by putting all the bibles on one side of a scale and had the tribe stack the other side with gold until the scale balances. The transaction was then complete. This particular day started out badly. His scale broke and all around him was nothing but bushes. How did he manage to accurately weigh the bibles in exchange for gold?

73.0 The running dog

Sheila and Tom were just married. They went on honeymoon and took their dog Sam along. One early morning Sheila left the Hotel Bedsores and went for a walk at 2km/h. One hour later Tom left the hotel and walked at 4km/h to catch up to Sheila. Sam who left the Hotel with Tom was rather excited and ran between them back and forth at 10km/h. How far had the dog run when Tom finally caught up to Sheila?

74.0 The long fishing pole

Uncle Peter bought his nephew Simon a one piece-fishing rod for his birthday. He had to send it by airmail, because he forgot about the birthday. The airport refused to put it on the plane because it was 3cm too long according to their regulations. Uncle Peter realised after a while that he could still send the fishing rod without bending or shortening it and still be within regulations as well. What did he do?

75.0 NASA and the Canaries

NASA once considered sending Canaries into space to study them under zero gravity conditions. The project was scrapped when someone realised the birds would die of thirst in space in spite of enough water being on board. Why?

76.0 Wine bottle

I fill a wine bottle approximately halfway with water. Using
only a ruler and closing the top of the bottle how could I
accurately measure what percentage of the total volume of the
bottle is filled with water?
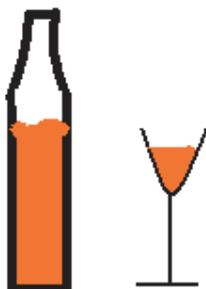
77.0 Trisecting an angle

If someone ever asks any of our readers to trisect an angle or
square a circle just using a ruler and compass, do not even try
to do it. It has been proved that it cannot be done and some
poor sods have spend their whole lives trying.

78.0 The boring Monkey question

A rope is hanging over a pulley. A monkey is hanging at the one
end and an anvil at the other end of the rope with the same
weight as the monkey. Disregard the weight of the rope and the
pulley. Disregard also the friction of the pulley. What will
happen to the anvil when the monkey starts to climb up the rope?
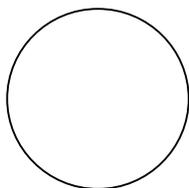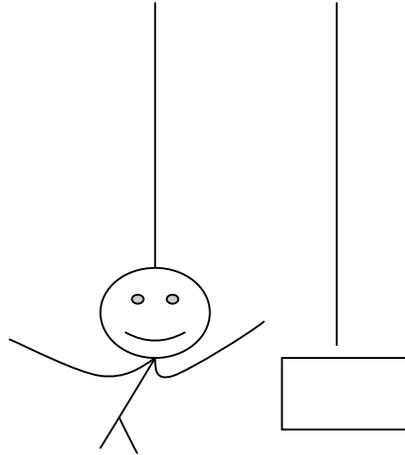
79.0 Murder at the movies

Strong-fingers and his wife went to the movies. During the movies he strangled his wife. After the movie had finished, he was able to get the body home without any attention from the audience. How did he manage this feat?

80.0 My three forms

I am gentle enough to soothe your skin, light enough to fly and hard enough to crack rock. Who am I?

81.0 A Big family

Mr. Very-Lone married a widow named Alsoe. Each had children of their own before they got married. Fourteen years later one day when Mr. Lone came home from work, his wife told him that his children, her children and their children were fighting all day long. Each parent was directly related to 9 of the 12 children in the Lone family. How many children were born after they got married?

82.0 Peter went to the Hardware shop

Peter enquired about certain items in the shop. The clerk told him that the price was R1 each per item. Peter then asked him whether 100 would cost R3. The clerk said yes. Peter then said that he would take 75. The clerk charged him R2. Peter paid him and left with his purchase. What did Peter buy at the hardware shop?

83.0 The murderous sister

A woman had absolute proof that her husband was brutally murdered by her own sister. The judge declared that although she was as guilty as sin, he could not punish her even though he wanted to. Why could he not punish her?

84.0 Product of a series

What is the product of the following series?

(X-A) * (X-B) * (X-C) * (X-D)......(X-Z)

85.0 Sending Valuables

John wanted to send his friend Berto a valuable watch. He had several locks with keys and also a strongbox with a locking ring. Berto did not have the key to any of John's locks. John could also not send over the key in an envelope as it could be copied. How should John go about sending the box so that his friend would receive the watch?

86.0 Inheriting his fortune

The Sultan told his two sons to race their camels across the desert to a distant city. The one whose camel was slower would inherit all his riches. The two sons sped off across the desert and wandered around for a few months. Their paths crossed that of a wise man. After telling him their story he gave them some advice. After hearing his advice they jumped on the camels and raced off to the city. What was the wise man's advice?

87.0 What time is it?

If it were two hours later, it would be half the time to midnight as it would be if it were an hour later. What time is it now?

88.0 The jailbird

Fish-eyed Jack got out of jail and pushed his car to the hotel on Eloff Street. When he got there he realised he was bankrupt. Explain his situation?

89.0 Falling off the ladder

Tiny Tim was washing the windows of a high rise building when he fell off the sixty-metre ladder onto the concrete below. He was not injured in any way. How is this possible?

90.0 Move a coin

Ten coins are placed in a horizontal and vertical row as shown.

```
           O
           O
    O   O  O  O  O
           O
           O
           O
```
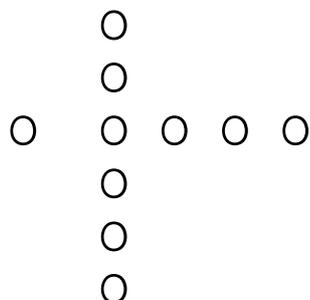
Move one coin so that we will have two rows counting up to six coins each!

91.0 It moved

Professor Jakes was on safari in the Africa jungle. Waking up one morning he felt something in his trousers' pocket. It had a head and tail, but no legs. When he got up it moved in his pocket, but he was not concerned and went upon his daily business. Why?

92.0 The lost Soldier

Just after the Second World War Tom Gun was on his way home. Being a soldier, he got lost as they all do sometimes. Walking

down the road trying his best to find his way back to Paarl he
came upon a sign at the side of the road at a four way crossing.
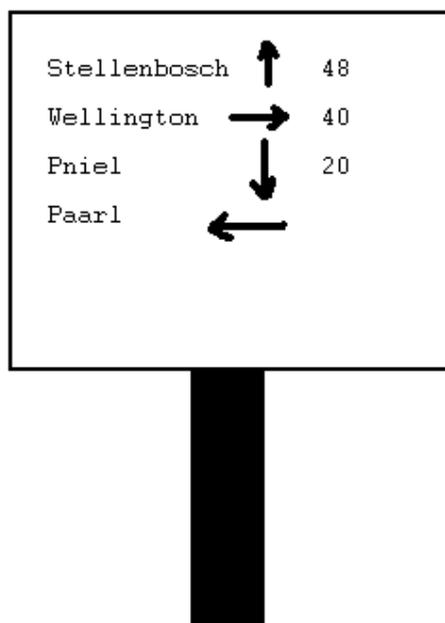
Some lousy vandal had painted across the distance indicated to
Paarl. He knew he had to turn left to get to Paarl, but what was
the distance?
Tom looked at the sign again and suddenly he knew the distance
to Paarl. What did Tom see?

93.0 How many pages

Bookmaker Font told his wife one evening, that he was quite
tired because he used 2989 digits that day to number the pages
of a recipe book. How many recipes did the book have if each
recipe was printed on two pages?

94.0 Farmer Brown

Farmer Brown's wife bought him a genuine blue overall with ten
pockets. One day he and his two sons went out to the garden to
fetch a pumpkin. He was very fond of Pumpkinseeds, so he cut
open the pumpkin and took out the seeds. His younger son counted
them and said to his dad that there were exactly 44 seeds.

Farmer Brown then asked his other son if it was possible to put the seeds in his overall's pockets so that each pocket contains a different number of seeds. What was the answer of his older son?

95.0 The not so bright Jeweller

Ernie Pernie brought a jeweller 6 golden chains each having 5 links. Ernie wanted all the chains to be linked to make one long closed circular chain. The jeweller told him that it would cost Ernie R5 for each link that he would have to open and close. Linking six chains would therefore cost Ernie R30. Ernie thought for a moment and then told the jeweller that it could be done for less than R30. Was Ernie right?
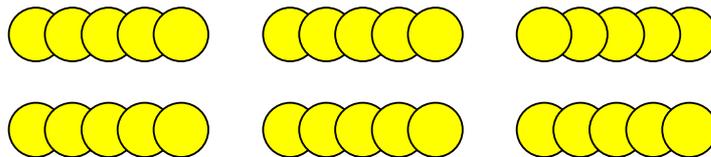
96.0 The Queen could not sleep

Lord Melbourne gave the word 'TERALBAY' to Queen Victoria and she could not sleep that night. The letters when rearranged, spelt an everyday English word. A very common one at that as well. What is the word?

97.0 Choosing socks

Al Bundy the world renowned shoe salesman woke up one morning, late as usual for work. He had not paid his electricity bill and he had to put on his clothes in the dark. His socks, he only wore black ones and white ones, were all mixed together in the drawer. How many socks did Al have to take out of the drawer to make certain that he had at least one pair that matched?

98.0 The classic 8 Queens problem

Uncle Jamie once told me that it was possible to place 8 queens on a chess board in such a fashion that not one of them would be in danger from any other queen. Uncle Jamie then showed me, after I had challenged him. Uncle Jamie also said that there

were quite a lot of solutions to this problem. Do you have a solution?
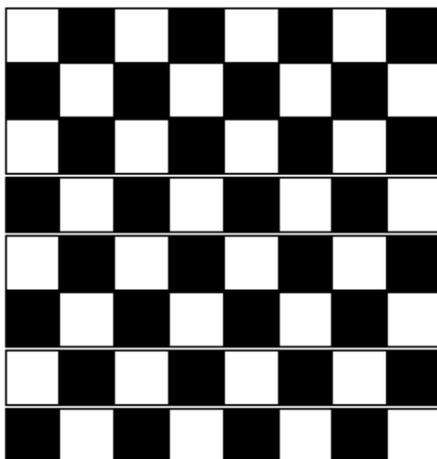
99.0 Change the equation

Little Miss Skirts wrote the following on the black board.

$$62 - 63 = 1$$

Could she correct her mistake by moving one part?

Could she correct her mistake by repositioning one digit?

100.0 Up and down the chimney

What can go up a chimney down, but cannot go down a chimney up?

101.0 Two masked men

Pete leaves home, runs for a short distance and turns left. He goes another short distance and turns left again. He runs another short distance turns left and after a little while is nearing home again. While nearing home he sees two masked men. Who are the masked men?

102.0 This riddle is sad and true

This all men want,
And are willing to fight for.

But in fighting for it,
Lose it.

103.0 Sold, bought and used

The man who sold it did not want it.

The man who bought it did not need it.

The man who used it did not know it.

What is it?

104.0 How many spots on the Dalmatian

Dal the Dalmatian has a lot of spots. If the number of Dal's spots is divided by the number of his legs, the remainder is three. The remainder divides Dal's spots exactly. If Dal's spots is divided by the total of legs, eyes, ears and tail a remainder of six is left. Dal has more than 60 spots, but less than 100 spots. How many spots does Dal have exactly?

105.0 Palindrome

A palindrome is a word or phrase that is spelled the same backwards as forwards, eg. madam.
What is the short sentence Adam used when he introduced himself to Eve in Eden?

106.0 Using all the digits

Professor Know-it told his class that it was possible to make a valid multiplication problem using all the digits from zero to nine. He said the product would look something like the following:

ABC X DE = FGHK1

The multiplication is therefore a number with three digits times a number with two digits equal to a number with five digits that ends on the digit one.

107.0 Parking lots

Six cars namely Q, R, S, T, U and V are to be parked in a lot.

The lot has six spots, numbered from one to six. The vehicles are parked according to the following rules.

Rule one: Q parks anywhere but on spots 5 or 6.
Rule two: R parks in only spots 4 or 5.
Rule three: S parks in only spots 3 or 6.
Rule four: T parks in only spots 2 or 6.
Rule five: U parks in only spots 1 or 3.
Rule six: V parks anywhere but on spots 1 or 3.
Rule seven: Each vehicle is parked in its own spot. That is one car per spot.

If R parks in spot four, where must V be parked?

108.0 Of snakes and diamonds

A very bad and ugly king had also some nasty ways. For his amusement he acquired a vicious poisonous snake. This snake was kept in a box with a sliding lid. When the king was in the mood he would pop a diamond into the box, slide open the lid and have one of his slaves try to get out the diamond. If the slave succeeded, the diamond was his. The slave was not allowed any tools or weapons. Needless to say, they all failed until one day. A distant relative of Salomon managed to get the diamond without being bitten. He was allowed to keep the diamond and also gained his freedom. How did he do it?

109.0 Painting the cube

If we have six different colours of paints, we can paint the six sides of a cube each a different colour. The colours can be arranged in various combinations.

How many uniquely different coloured cubes are possible? Remember, by turning the cube some of the combinations may turn out to be the same and we don't want that!
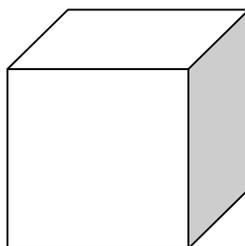
110.0 Pairs of rabbits

Little Pete got two rabbits for his birthday from his Auntie. The rabbits, male and female were newly born. The rabbits were grown up one month later. They immediately mate and one month later gave birth to another pair like themselves. The newly born rabbits started to grow and one month later they were grown up and mated. Meanwhile the pair Pete got mated directly after giving birth and gave birth one month later to a pair like themselves. The mature rabbits therefore gave birth to a pair of rabbits every month. The new-borns took two months before giving birth to a pair. How many pairs of rabbits did Pete have at his next birthday?

111.0 Palindrome two

Which nine digit numerical palindrome, when multiplied with itself, produces a seventeen digit numerical palindrome?

112.0 The big deal

Jimmy the Snake had a business deal coming up. He wanted to take three of his partners along to the business lunch at Hairy Harry's. All his partners were either liars or truth tellers. Jimmy however did not know which is which. When his three partners were sitting in his office he bluntly asked the group who of them were truth tellers. The first partner said that all three of them were truth tellers. The second partner said that only one of them was telling the truth. The third partner agreed and said that the second partner was telling the truth. Who lied and who told the truth?

113.0 What next

What would come next in the following series:

D.31
N.30
O.31

114.0 Sack of potatoes

Farmer Brown wanted to take a sack of potatoes to the market. The sack weighed 100kg. 99% of the potatoes were water and the rest was solid stuff. Farmer Brown forgot the sack in the sun and two days later when he picked up the sack 98% of the potatoes were now water. How much did the sack of potatoes weighed when 98% of them were water?

115.0 The 10 digit number

Find a 10 digit number so that the first digit is the number of zeros in the number, the second digit is the number of ones in the number, the third digit is the number of twos in the number and so on. The last digit will therefore be the number of nines in the number.

116.0 More or Less

Little Fotja has a bag that contains 100 fruit. In the bag are Potchas, Unchas and Nonchas. The Nonchas are more than two times the Potchas. Three times the Potchas are more than four times the Unchas and three times the Unchas are more than the Nonchas. How many of each kind of fruit is in Fotja's bag.

117.0 Ahmed the Fruit seller

Ahmed sells fruit at the local Fruit market. He uses a balance scale and 3 weights to weigh fruit in whole kilos from 1 to 13 kg. What are the weights?

118.0 Picasso's painting

Dirk bought a painting of Picasso. He paid R70 for it. He then sold it for R80, bought it back for R90 and sold it again for R100. How much profit did Dirk made?

119.0 My father, my uncle and I

My father is older than my uncle. Transposing the two digits of my father's age it becomes my uncle's age. Transposing 34 for instance, 34 become 43. The difference between their ages is twice my age. My uncle is also ten times my age. What are the ages of my father, my uncle and my age?

120.0 Squares on a chessboard

How many squares are on a chessboard?
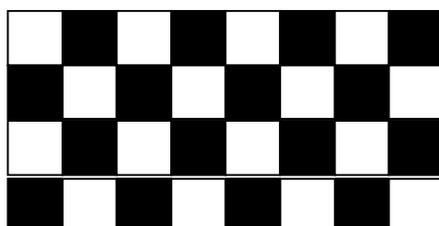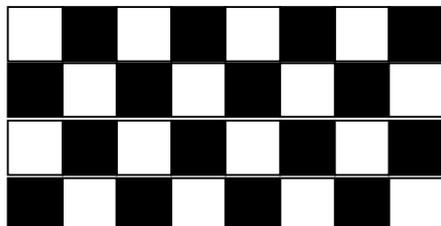
121.0 Complete the sequence

```
1    1    1    1

1    3    5    7

1    5    13   25

1    7    25   ?
```

122.0 The odd character

Which character does not belong in the following series?

H C N S Z

123.0 Occurrences

What occurs once every two minutes, twice in a moment, yet never in a thousand years?

124.0 Connect the dots

Connect all the dots, using four straight connecting lines!

O   O   O

O   O   O

O   O   O

125.0 A logic conclusion

The following statements are all true. Red apples are fruit.
Yellow apples are edible. Apples are round. Fruit can be either
red or yellow.

Which is the right conclusion?

1.0   Red apples are edible.
2.0   Yellow fruit is edible.
3.0   Apples are yellow.
4.0   Yellow apples are fruit.
5.0   Round fruits are edible.
6.0   Neither of the above is true.

126.0 The Farmer's sheep

Koos Paxton a Karoo farmer spoke to his neighbour one morning.
He said that one fifth of his sheep were in the barn. One third
of the sheep were at the waterhole. He also had new-borns to the
number of 3 times the difference of the sheep in the barn and
waterhole. There were also 100 of the sheep out in the fields.
How many sheep did Koos have?

127.0 The will of bachelor Barnie

Bachelor Barnie left R10 000 to three relatives and their wives.
Together the wives received R3960. Hanlie received R100 more
than Ilse. Marise received R100 more than Hanlie. Johannes
received the same as his wife. Calla received 1.5 times the
amount of his wife and Alfred received twice the amount his wife
got? Who is married to whom?

128.0 Father and son

When my son Christoff is 15 years older, he will reach the age
that I had, when I was 8 times as old as he was then. When my

son reaches the age I have today, the sum of our ages will be 31 times the age he had when I was 8 times as old as he. How old is my son?

129.0 The unequal balance

Niek bought a balance with two unequal hands. He wanted to determine the weight of a loaf of bread he had bought. Putting the bread on one side he needed 3/8 of a kilogram to balance the scale. Putting it on the other side he needed 6kg to balance the scale. How much did Niek's bread weigh?

130.0 Riddle

More beautiful than the face of your sweetheart is this.
Yet more wicked than the devil himself.
Dead men eat it all the time.
Live men who eat it die slowly.

131.0 The blue Pub

Getting into the blue Pub is very dangerous. The doorman asks you a question and if your answer is wrong he shoots you. You devise a method of listening to the doorman and the answers he gets. He said 12 to the first customer and he answered six. He said 6 to the second customer and he answered 3. You decide to go in. He says 4 to you and you answer back 2. He shoots you. What should your answer have been?

132.0 The impossible equation

Change the impossible equation made out of matches into a possible equation by repositioning one match.

$$|| = \bigvee |$$
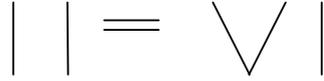
133.0 Passed from fathers

Passed from fathers to sons.
And shared between brothers.
Its importance is unquestioned.
Though it is used more by others.

134.0 Day of the week!

Carel had a nasty accident and has been in a coma for some time.
When he wakes up he asked some of his visitors what day it is.
Albert tells him that the day after tomorrow is Wednesday.
Bertus says that today is Wednesday. Charl is certain that
tomorrow is Wednesday. Danie tells Carel that today is not
Monday or Tuesday or Wednesday. Eric is certain that Yesterday
was Thursday. Fanie is certain that tomorrow is Thursday. George
remarks that yesterday was not Saturday. As it happens, all but
one of the statements are false. Given all the statements of
Carel's friends, what day is today?

135.0 The Safari

Mike and Callie went on Safari. One day they encountered a
fierce lion. Callie immediately sat down and put on his running
shoes. Mike taunted him by remarking that the running shoes
would sure make him faster than the lion. Which one of the
following remarks was Callie's answer and why?

A: 'Yes, with these shoes I sure can _____'
B: 'No, but by sitting still the lion _____'
C: 'No need for running, the lion does not attack _____'
D: 'I do not have to outrun the lion ____ '

136.0 Corner numbers
In the squares shown the middle number of each side is the sum
of the corner numbers. Find the corner numbers!

	7	
10		21
	24	

	16	
21		17
	22	

137.0 Ten Digits

The calculation ABC - D - E - F - G - H - I -J = 100 is such that each letter stands for a different digit. The digits being (0123456789). What number is ABC?

138.0 How many snakes

Johannes my brother loves pets. He has snakes, cats, rabbits and birds. One day he counted his pets. He counted 15 heads, 6 wings and 38 legs. How many snakes does he have?

139.0 Some sneaky riddles

1. If you have it, you want to share it. If you share it, you don't have it.

2. You can hold it just for a short while, sometimes you lose it, and yet it will stay with you your whole life.

3. What breaks as soon as you speak of it?

4. What grows when given food, but dies when given water?

5. The more you take, the more you leave behind.

6. It has a mouth that never speaks; it has a bed and never sleeps.

7. You must keep it after giving it.

140.0 My cat

I can prove that my cat has three tails. Can you?

141.0 Keeping the dogs at bay

You are given a 5x5 grid. In this grid you have to place 5 dogs and three cats in such a way so that the dogs can't get to any of the cats. Dogs can move like the queen in chess. Any number of moves up, or any number of moves down, or any number of moves sideways, or any number of moves diagonally. Below is a possible scenario, but it is not the solution.

D	D	D		
D	D			
				C
			C	C

142.0 Dividing into parts

Divide 400 into four parts so that the sum of the four parts is 400 and so that part one divided by 4 and part two multiplied by four and part three plus 4 and part four minus 4 are all equal to the same number.

143.0 Star of David

Below is a Star of Dawid done with six triangles and one hexagon, all done with 18 matches. Reposition 2 matches so that

the Star is made up of six triangles without the hexagon. The star would then still be the Star of Dawid, but the hexagon will have disappeared.
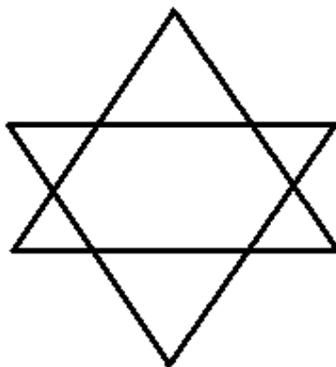
Answers to the brain teasers

2.0 Answer to The farmer question

He first took the buck to the other side, because the lion would not eat the apples. Then he went back and fetched the lion. He took the buck back across the river after he delivered the lion at the other side. Then he dropped the buck at the side where the apples were waiting for him and took the apples to where the lion was waiting. Finally he went back for the buck.

3.0 Answer to the traveller question

Hint

 The question must be put to the brothers in such a way so that their response would be the same.

Answer

The question you ask is 'which direction would your brother point to if I ask him where Cape Town is? '.
If you ask the brother who always tells the truth, he will tell the truth about the brother that lies and he will then point in the direction of Durban.
If you ask the brother who always lies, he will lie about the direction his brother would have pointed to and thus he will point in the direction of Durban.
Therefore to go to Durban you just follow the direction that the one you ask points to.

4.0 Answer to the in the desert question

Hint

Start at the end. That is start with four litres in the five-litre container and also four litres in the eight-litre container. Then work backwards to eight litres in the eight litre container.

Answer

8 l container	5 l container	3 l container
8	0	0
3	5	0
3	2	3
6	2	0
6	0	2
1	5	2
1	4	3
4	4	0

5.0 Answer to the gold problem

Hint

First put three balls on each side.

Answer

1. Put three balls on each side of the scale, if they balance the gold ball is among the remaining three balls.
2. If they do not balance, the heavier side contains the gold ball.
3. Say the scale balances, therefore the remaining balls have to be weighed.
4. Take two balls from the three remaining balls and put one on each side of the scale.
5. If they balance the remaining ball is the gold ball.
6. If they do not balance, the heavier of the two is the gold ball.
7. If the three remaining balls (see 1) contain the gold ball then by following steps 4 to 6 you could again determine which one is the gold ball.
Therefore you just weigh the balls twice to determine which one is the gold ball.

6.0 Answer to the magic square question

Hint1

The result of each calculation is 15.

Hint2

Put 5 in the middle.

Hint3

Put 1 to the left of 5 and nine to the right of 5.

Answer

```
+-----+-----+-----+
|     |     |     |
|  6  |  7  |  2  |
|     |     |     |
+-----+-----+-----+
|     |     |     |
|  1  |  5  |  9  |
|     |     |     |
+-----+-----+-----+
|     |     |     |
|  8  |  3  |  4  |
|     |     |     |
+-----+-----+-----+
```

Or you could write a little computer program to try out all the combinations.

7.0 Answer to the poison question

Hint

Rocks.

Answer

The poison was in the ice cubes and the ice cubes in Bill's drink did not have time to melt before he downed his drink. Ted drank more slowly and therefore the cubes melted and the poison got to him.

8.0 Answer to the murder question

Hint

Why were they speeding?

Answer

The woman was pregnant and went into childbirth. There were complications and she died, but the child lived.

9.0 Answer to the man in tower question

Hint

Switch on the light.

Answer

He was in a lighthouse where he was the lighthouse keeper and he forgot to switch on the light to warn the ships of dangerous rocks.

10.0 Answer to the open Windows question

Hint

The sea is full of fish.

Answer

The broken glass is the remains of a glass fishbowl. The two dead bodies are fish and the water was once inside the bowl. The wind blew the curtains against the fishbowl, which fell off the table.

11.0 Answer to the elevator question

Hint

Circus.

Answer

The man was a dwarf and he could not reach high enough for the 23rd button.

12.0 Answer to the glass of water question

Hint

Some ailments are cured in bizarre ways.

Answer

The man had hiccups. The water did not help. Therefore the barman gave him a fright by threatening the man with a pistol, which cured the hiccups.

13.0 Answer to the hat question

Hint

Think what would have happened if there were two red hats and one white hat.

Answer

If there were two red hats and one white hat, there would still have been three hands in the air. The men with the red hats however would have seen their red partner's hands in the air. This is because they saw the red hat on each other's head because the other man has a white hat on his head. They would therefore have known immediately that they have red hats and would have answered very quickly. No one answered very quickly and therefore the more intelligent of the three realised that he could not have had a white hat, because the other two would have answered then immediately and that was when he realised that he had a red hat on his head.

14.0 Answer to the man in love question

Hint

Winters are very cold in Alaska.

Answer

During the following winter the lake froze up and he skated across the lake to his love.

15.0 Answer to the apples in basket problem

It is not 75.

Answer

This is an easy algebraic equation.
Let x be the total amount of apples. Then x = 50 + x/2
Therefore x/2 = 50 and x = 100. The total amount of apples was therefore 100.

16.0 Answer to the horse salesman question

Hint

Start at the end.

Answer

After the transaction with John, he had nothing left. Therefore if he sold John only half of the horses he had left, then the half of the horse he gave John as present must have been half of the horses he had left. Therefore he sold John half a horse and gave him half a horse. Therefore when he finished with Ben, he had one horse left.

Let's say he had y horses when he started with Ben.
Therefore he sold Ben y/2 horses and gave him 1/2 a horse.
Therefore when he finished with Ben he had y - (y/2 + 1/2) left which we know is one horse.

Therefore y - (y/2 + 1/2) = y/2 - 1/2 = 1.
Therefore he had y = 3 horses when he started with Ben.

The same argument follows for Joe so that z/2 - 1/2 = 3
And z = 7. He therefore started with 7 horses.

17.0 Answer to the barber question

This is a paradox. You will argue in circles forever.

18.0 Answer to the race question

We know that this situation is absurd, but it sounds so logical. The mistake we make here is to treat the race as if in discrete quantities, which it is not. Movement is fluid and ongoing and can not be treated as discrete quantities.

19.0 Answer to the dining out question

We made a classical error. The affair did not cost them thirty rand, but only 9*3 = 27 rand which is the meal price plus the tip of the waiter. The waiter took 2 rand and therefore the meal cost them 27 - two rand tip = 25 rand. Remember, the waiter gave them 5 rand discount and therefore 25 + 5 = 30, the original price of the meal.

20.0 Answer to the fair share question

All of them got a fair share.
Mike got 12/2 = 6 sheep and 11/2 = 5.5 sheep.
John got 12/4 = 3 sheep and 11/4 = 2.75 sheep.
Charles got 12/6 = 2 sheep and 11/6 = 1.8333 sheep, although 6 + 3 + 2 = 11 sheep.

21.0 Answer to the crossing the river question

The two sons cross first and one comes back.
One father then crosses the river and stays at the other side while the son at that side then comes back.
The two boys again cross the river together to the other side and one stays there while the other one comes back alone.
The remaining father then crosses alone and the boy at that side then comes back to fetch the other boy.

22.0 Answer to the goblet of gold question

You do not need to count to 1000. Place the letters in a circle with the letter A at the top and the G at the bottom. You will discover that each letter is like a digit on a watch with 12 letters all around. The 1000 would be like a thousand hours. Therefore we have 1000/12 = 83 with a remainder of 4. We have therefore walked around the clock 83 times and we still have to walk 4 more digits. Therefore we must still walk A, B, C and D. Therefore D must be the goblet made of gold.

23.0 Answer to the grandpa's age

Let's assume Grandpa had x sons. Therefore each son had x-1 brothers and therefore each son had x-1 sons. The total number of grandsons was therefore x times (x-1). Sons and grandsons in total were therefore x + x times (x-1) = x + x times x - x = x times x.
Therefore if x = 7 then x times x = 49
If x = 8 then x times x = 64
If x = 9 then x times x = 81 and Grandpa therefore was 64 years of age at that stage.

24.0 Answer to the cricket match

Let's suppose that this last game the banker played was game number y.
Therefore before this game he played y-1 games and had a total score of z runs. His average was therefore $z/(y-1) = 27$
His average after the last game then was $28 = (z+40)/y$

Therefore $27y - 27 = z$ and $28y - z = 40$

Therefore $y = 13$ and $z = 324$.

For an average of 30 he then needed $30 = (324 + x)/13$
So that $x = 66$ runs and he therefore needed to score 66 runs in the last game to bring his average up to 30.

25.0 Answer to the hungry men question

Let's suppose we had x potatoes in the beginning.
The first man ate $x/3$ and there were $2x/3$ potatoes left.
The second man ate $(2x/3)/3 = 2x/9$ potatoes and there were $2x/3 - 2x/9 = 4x/9$ potatoes left.
The third man ate $(4x/9)/3 = 4x/27$ potatoes and there were $4x/9 - 4x/27 = 8x/27$ potatoes left.
Therefore $8x/27 = 8$ so that $x = 27$
The innkeeper therefore cooked 27 potatoes for the men

26.0 Answer to the mixing milk and water question

The amounts are the same.
Let us suppose there is x milk and x water. We therefore pour z milk into the water container.
The container of water is now x+z and the container of milk is now x-z.
The water milk mixture is therefore x:z in the water container.

Next we take z from the water container and pour it into the milk container. The amount of water in this z is therefore $z(x/(x+z)) = xz/(x+z)$.
We therefore have now $xz/(x+z)$ water in our milk container.

In the water container we havd z milk. We took z out of this container and pour it into the milk container.
This z contained $z(z/(x+z))$ milk. We had z milk in the water container. The milk left in the water container is therefore $z - zz/(x+z) = (zx + zz - zz)/(x+z)$ which is $xz/(x+z)$ milk in our water container. The amounts are therefore the same.

27.0 Answer to the three Brides question

If the readers could work out the puzzle concerning the two men and their sons, this one should not present any problems.

28.0 **Answer to hanging the culprit**

Hint: His answer must form a paradox.

Answer: I am to be beheaded.

29.0 **Answer to the sharing of milk**

Hint1

The seventh dwarf has nothing in the beginning and also nothing at the end.

Hint2

Each dwarf has the same amount in his glass as the previous dwarf when he starts sharing his milk.

Answer

If dwarf1 has 6 parts of milk in his glass, he will then give each other dwarf 1 part of milk. If dwarf2 has 5 parts of milk in his glass before dwarf1 starts to share his milk, he would then have 6 parts after dwarf1 has shared his milk. He therefore will have 6 parts to share. Dwarf3 then must have 5 parts when dwarf2 starts to share, so that dwarf3 will have 4 parts of milk when dwarf1 starts to share and so on.

If they have 6, 5, 4, 3, 2, 1 and 0 parts when they start, dwarf1 will again have received 6 parts after dwarf7 has finished and dwarf2 5 parts and so on.

All together there are therefore 6+5+4+3+2+1 = 21 parts of milk which is 3 litres. One part is therefore 1/7 of a litre.
Dwarf1 therefore has 6/7 of a litre; dwarf2 has 5/7 of a litre and so on.

30.0 Answer to observing the planets

If astronomer Z on planet z is watching planet b, then the astronomer on planet b must be watching planet z. We could therefore pair planets off. Going on we will be left with one planet in the end, because we have started with an uneven number of planets.

31.0 Answer to another car story

Hint

The man liked sports cars.

Answer

Ever heard of a convertible?

32.0 Answer to the triangle question

Hint

The answer needs three dimensions.

Answer

Make a triangle with 3 sticks and put the other three sticks on the corners of the triangle showing upwards so that their other ends all touch. The construction will look like a pyramid.

33.0 Answer to the assistant question

A butcher weighs meat.

34.0 Answer to the nine minutes

There are several solutions. We show only one of them.

Step 1: Start the 4 minute and the seven minute hourglass.

Step 2: When the four minutes have run out, start it again.
Step 3: The seven minutes hourglass will now run out and only one minute will be left in the 4 minute glass.
    We begin our timing at this stage.
Step4: Let the remaining one minute left over in the four minute hourglass run out.
Step 5: Run the four minute glass again. Five minutes have now elapsed.
Step 6: Run the four minute glass again. Nine minutes have elapsed.

35.0 Answer to the missing coin

One coin is not fifty cents. It's 20 cents. The other coin is fifty cents. So altogether we have seventy cents.

36.0 Answer to the three light switches

Hint

Wow, that's hot!

Answer

John went down to the basement and moved switch number-one to the on position. He waited a few minutes and moved switch number one to the off position. Then he moved switch number two to the on position and ran up the stairs.

He felt the two dead bulbs with his hands. The one bulb was still hot, because it had been switched on a little earlier. The hot light belonged to switch one. The burning light belonged to switch two and the cold dead light belonged to switch three.

37.0 Answer to reduce the boxes
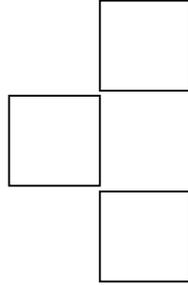
38.0 Answer to what comes next

Hint

Count from one to ten.

Answer

The letters are the first letter in the numbers one, two, three etc.

The next letter would therefore be E for eleven.

39.0 Answer to plant season

Draw a star with five points! Plant a tree on each point and each intersection of the sides.
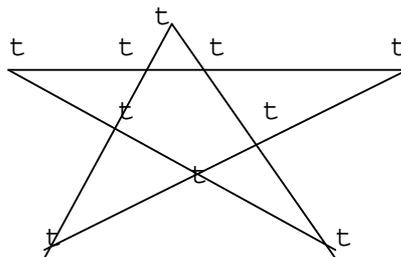
40.0 Answer to the shopkeepers profit

We do this the mathematical way.

Let the total hamsters bought be x
Then the total birds bought is x/2

He therefore bought the whole lot at 2x + x/2

The selling price of the lot is 2(11/10)x + (1/2)(11/10)x

His profit is therefore selling price - purchase price

which is x/4

Now x is the total amount of hamsters he had. His profit in rands is therefore a quarter of the number of hamsters he originally bought.

He had seven animals left over.

Dependant on the animals left over the price would fluctuate.

Let us draw a table to demonstrate the profit fluctuations.

hamsters	birds	price bought	+10%
0	7	R7	R7.70
1	6	R8	R8.80
2	5	R9	R9.90
3	4	R10	R11
4	3	R11	R12.10
5	2	R12	R13.20
6	1	R13	R14.30
7	0	R14	R15.40

Now we know that one of the items of the right hand column must equal x/4.

This means that x = 4 times that item. We also know that x is a whole number, because x is the quantity hamsters Furs bought and therefore only 11 will fit so that 11x4=44.
All the other items times 4 will deliver a decimal point.

Our profit is therefore R11.

41.0 Answer to the Cook's dilemma

1. Fill up the five ounces container from the jug.
2. Fill up the three ounces container from the five ounces container.
3. We are now left with two ounces in the 5 ounces container and the three ounces container is full.
4. Empty the three ounces container into the jug.

5. Pour the remains of the five ounces container into the three ounces container.
6. We now have 2 ounces in the three ounces container.
7. Fill up the five ounces container from the jug.
8. Fill the three ounces container to its brim with the five ounces container.
9. Because the three ounces container already has two ounces in it, only one ounce is needed to fill it. We therefore have four ounces of oil left in the five ounces container.

42.0 Answer to amoebas in jars

If a jar was full, then three minutes earlier it must have been half full. Jar one had half the number of amoebas of jar two when the multiplication began. Therefore jar one always had half the number of amoebas of jar two.

After jar two had filled up, it could not go on multiplying. At that stage jar one was half full. Three minutes later it was full.

The time it took jar one to fill up is therefore 3 hours and three minutes.

43.0 Answer to windy flight

Let the distance between Nowhere and Somewhere be x km.
Let the speed of the plane in none windy conditions be y km/h

His round about time is therefore t = 2x/y

His time from Nowhere to somewhere with a wind of z km/h on his tail will increase his speed to y+z

His time therefore from Nowhere to Somewhere is
t1 = x/(y+z)

Wind from the front will decrease his speed to y-z

His time from Somewhere to Nowhere is therefore
t2 = x/(y-z)

His total time in windy conditions is therefore
t3 = t1 + t2 = x/(y+z) + x/(y-z)

t3 = 2xy/[yy-zz] = 2x/[y-zz/y]

Now y-zz/y is smaller than y so that t3 will then be bigger than t.

Windy conditions will therefore ensure a longer round trip.

44.0 Answer to twenty minutes earlier

Let us assume a distance of x between the station and Mr. Penpusher's home. The round trip for his wife every afternoon is therefore t1 = 2x/y if her speed is y.

Her round trip the particular afternoon in question was 20 minutes faster. That is t2 = t1 - 20

Let the distance her husband walked be z.

Therefore t2 is also (2x-2z)/y

Let the time he walked be t3

He started to walk one hour before she would have arrived at the station. Because she would have been on time at the station, if he walked for 40 minutes, there would be still 20 minutes of the hour left which is the time she would have taken to drive from that spot to the station.

The time for her from the spot to the station is therefore 60-t3, which is equal to the distance z divided by her speed y

Therefore z/y = 60 -t3

Now t1 = 2x/y

Now t2 = t1 - 20 = (2x-2z)/y = 2x/y - 2z/y = t1 - 2z/y

Therefore 2z/y = 20 and z/y = 10 = 60- t3

Therefore t3 = 50

Mr. Penpusher therefore walked for 50 minutes before his wife picked him up.

An easier way to figure this out is as follows.

She saved on twice the distance he walked. She would have taken a hour minus the time he walked to cover the distance from where she picked him up to the station. Therefore twice this time is twenty minutes. Therefore the time she took from where she picked him up to the station is 10 minutes. He must therefore have walked for 50 minutes.

45.0 Answer to a question of weights

Six weights, namely 1, 2, 4, 8, 16 and 32.

If a reader finds a better answer, please let me know.

46.0 Answer to the wrong labels

We know all the labels are wrong. Therefore the box containing the lemons and oranges label may have either oranges or lemons inside. If we open this box and take out a fruit and it is a lemon, we know that the box contains only lemons.

If this box contains only lemons then the box marked oranges, which might contain lemons or lemons and oranges must be the box containing lemons and oranges because it cannot contain lemons. The last box labelled lemons is therefore the box containing oranges.

The same argument follows if we pick an orange out of the box labelled lemons and oranges. This box then contain only oranges. The box labelled lemons, which we know may contain oranges or oranges and lemons then must contain lemons and oranges. The last box labelled oranges therefore contains lemons in this scenario.

We see therefore that we only have to pick one fruit and that we take that fruit from the box with the marked label lemons and oranges.

47.0 Answer to the lost money

Hint
Pick up a book and examine pages 35 and 36.

Answer
The pages 35 and 36 are back to back. Try hiding R100 between them. The butler went to jail.

48.0 Answer to at the movies

Let the men be m, the women be w, and the children be c.
Then m + w + c = 120 and 5m + 2w + c/10 = 120
If we substitute 17 for m, 13 for w and 90 for c the two equations work out fine.
Therefore 17 men, 13 women and 90 children went to see the movie.

49.0 Answer to heads and feet

Let the total number of birds be b and the total number of cows be c.

The b + c = 30 and 2b + 4c = 100

Therefore b = 10 and c = 20

He therefore has 20 cows and 10 birds.

50.0 Answer to earth's diameter

As we know the circumference of the earth can be worked out in terms of its diameter.
The circumference is pi times the diameter.
The diameter of the earth for 40 000 km is therefore
12 732.395 km.
The diameter for 40 000 and 3 metres is therefore
12 732.396 km.
The difference is therefore 1 metre.
The rope would therefore be suspended half a metre above the ground.

51.0 Answer to the Dancers question

If 7 dancers lose 20 kg in 8 hours, they will lose 10 kg in four hours. Seven extra dancers will also lose that much. The new dancers lose weight only half as fast and we therefore need 14 extra dancers

52.0 Answer to the camper question

North Pole.

53.0 Answer to who stole the cookie.

If Fred is lying then his statement is false, so Harry must be telling the truth. If Fred is telling the truth, then Harry is a liar. Therefore either Harry or Fred is telling the truth. This means that Lisa is lying and she must have stolen the cookie. This means that Harry lied when he said Fred stole the cookie. Fred is therefore the only one telling the truth.

54.0 Answer to the Clock problem.

Before leaving for his sister Henry winds his clock and sets it on 12H00. Arriving at his sister's place he notes the time. Let this time be A. After he leaves his sister's place, he notes the time again, say B.

The time he had spend at his sister's place is therefore
Z = B-A.
When he arrives at his place he notes the time on the clock, say C. The total time he was away from his place is therefore D = C-12H00. The time he was on the road is therefore E =D-Z.
This time is the round about trip time. The time from his sister to his place is therefore half of the total time he spend on the road which is therefore E/2. The correct time when he arrived at his place is therefore the time he left his sister's place, which is B plus the road time namely E/2.

55.0 Answer to the Factory problem.

Let the total men be m and let the total women be w.
Therefore m + w = 350.
The total women are therefore 350 - m.
Let the amount of men who accept the offer be (1-x) times m.
The men who reclined are therefore x times m.

Therefore the total paid out is T = 8.15(350-m) + 10(1-x)m

Therefore T = 8.15(350)-8.15m + 10m -10mx

Because the total paid out is independent on m the total is 8.15 times 350 which is R2852.50

Therefore –8.15m + 10m –10mx = 0

Therefore x = 0.185

The number of men who reclined the offer is therefore 0.185 times m.

Now this is 37m/200, which must be an integer. M is therefore 200 so that the total women are therefore 150.

Each got R8.15, so that all together the women got 8.15 time 150, which is R1222.50

56.0 Answer to the six gallons container Question

Empty all the containers.
We use water for our pouring.

1.0 Fill the 4 gallons container and empty it into the 9 gallons container.

2.0 Fill the four gallons container again and empty it into the 9 gallons container again.

3.0 Fill the four gallons container again and top up the nine gallons container.

4.0 The four gallons container now has three gallons left.

5.0 Empty these three gallons into the six gallons container and empty the nine gallons container in the sand.

6.0 Do steps 1.0 to 5.0 again.

7.0 If the six gallons container is neatly filled without spilling anything, then this container is really a six gallons container.

57.0 Answer to the woman and the taxman

The factors of 36 are 1,2,2,3 and three.

The different sums that can be form with the above are as

follows.

```
Sum1 = 1+2+18 = 21
Sum2 = 1+6+6 = 13
Sum3 = 2+2+9 = 13
Sum4 = 1+4+9 = 14
Sum5 = 1+1+36 = 38
Sum6 = 1+12+3 = 16
Sum7 = 2+3+6 = 11
Sum8 = 3+3+4 = 10
```

The taxman would have known the ages of the children immediately after getting the neighbour's address except if the address was 13. Thirteen is duplicated. Because he went for more information the sum of their ages must have been thirteen. When the woman told him her eldest was asleep, he knew the eldest was not part of a twin and so sum2 is not the correct option. Sum3 is therefore the correct option and the woman's children were aged 2, 2 and nine.

58.0 Answer to the run away prisoner

Hint: He could not leave the road the moment he saw the police car.

Answer: Jack was on a bridge and the distance towards the police car was much shorter than the distance backwards. If he had turned his back and ran he would have been caught on the bridge.

59.0 Answer to the well question

On the first day the monkey climbs up 3 metres and falls back two. He therefore gains a metre each day. On the 27th day he climbs up to 27 metres. On the 28th day he climbs up 3 metres and grabs the railing at the top. It therefore takes him 28 days to escape.

60.0 Answer to the cheating province

Hint

0.9 times 1 = 0.9; 0.9 times 2 = 1.8; 0.9 times 3 = 2.7 etc.

Answer

Put nine bars of province one on the device. Put eight bars of province two on the device. Go on until you put one bar of province 9 on the device.

When you switch the device on, it will show the weight of the

collection of things you have put on the device.

If the cheater had been province one, the nine bars would have weighed in at 0,9 times 9 =8.1.
The device would therefore have shown the total as x.1.
If the cheater was province two the device would have shown the weight as y.2.
Our decimal point therefore shows us the cheater.
If the cheater had been province nine, the decimal point would have been comma 9.
If no decimal point was present, our cheater is province ten.

61.0 Answer to the 100 Gems

Ali Baba can take all the gems that are not perfect squares.
That is, he has to leave gems 1,4,9,16,25,36,49,64,81 and 100.

62.0 Answer to buried treasure

A little trigonometry will show you it is still possible to retrieve the treasure.

Walk from tree B towards tree A counting your steps. Reaching tree A, walk halfway back towards tree B, say x metres. Turn 90 degrees towards your right and walk the same distance x metres. Start digging.

63.0 Answer to dirt in hole

A hole is empty.

64.0 Answer to racing cars

When the cars meet, they are both at the same place.

65.0 Answer to the boxing match

Hint: The boxers could not grow beards even if they wanted to.

Answer: The boxers were women.

66.0 Answer to Florist Free

The total is the roses plus two. The total is also the tulips plus two. The total is also the carnations plus two. Three times the total is therefore the roses plus the carnations plus the tulips + 6. The roses plus the carnations plus the tulips is also the total. Therefore three times the total is the total plus 6. Therefore two times the total is 6. The total is therefore three.

67.0 Answer to the cheap box

The camera and the box cost R100. The camera is also R80 more than the box.

The R80 and the box and the box is therefore R100. The box and the box is therefore R20. The box is therefore R10.

68.0 Answer to the torn up message

Put the four pieces of paper underneath each other as follows.

```
W C H S
I O O O
L M M O
L E E N
```

The columns then read from left to right as WILL COME HOME SOON.

69.0 Answer to four men and a flashlight

Tweety and Obi cross first. Thus two minutes have passed.
Obi goes back to Tim and Fred. That's three minutes gone by.
Tim and Fed cross next. That's thirteen minutes gone by.
Tweety goes back to Obi. That's fifteen minutes gone by.
Tweety and Obi cross last and that's seventeen minutes gone by.
They make it in time and save the day.

70.0 Answer to the rich Arab

If Ali had some camels then one of the first two statements is correct. This also ensures that the last statement must be correct. Two statements will therefore always be correct. This cannot be and Ali therefore has no camels.

71.0 Answer to breaking the record

Piston can never go too fast. Breaking the record of 120km/h means that he would have to cover the two laps in less than 1 minute. One his first lap he used up a minute by going at only 60km/h. His time was therefore used up and no matter how fast he would have covered the second lap, he would never have been able to cover it in less than zero seconds.

72.0 Answer to selling Bibles

Hint

Use the river.

Hint

Use the canoe.

Answer

Remember he paddled down the Congo. He stacked all the bibles in the canoe and drew a line on the canoe at water level. He then took out all the bibles and let the tribe fill up the canoe with gold until the mark was reached.

73.0 Answer to the running dog

If Tom walked for 1 hour he would have covered a distance of 4km. If Sheila walked for two hours she would have covered a distance of 4km. Tom therefore caught up to Sheila in 1 hour.
The dog ran at 10km/h for that whole hour. The dog therefore ran 10km.

74.0 Answer to the long fishing pole

He used a carton 3cm shorter than the fishing pole and put it in the carton diagonally.

75.0 Answer to NASA and the Canaries

Canaries unlike humans need gravity to swallow.

76.0 Answer to the Wine bottle problem

Measure the height of the water inside the bottle say n cm. Turn the bottle around so that the top is now at the bottom and measure the air space in the cylindrical part of the bottle say m cm. These two figures added together (n+m) equal the height of a regular cylinder with the same volume as the wine bottle. The percentage water in the bottle is therefore our first measurement namely n divided by the two figures added together namely n+m.

$$\text{Percentage water} = \frac{100 \times n}{m + n}$$

78.0 Answer to the boring monkey question

The anvil will ascend at the same rate as the monkey.

79.0 Answer to murder at the movies

They went to a drive-in movie.

80.0 Answer to my three forms

I am water in my three states namely water, gas and ice.

81.0 Answer to a big family

All the children together are 12. The children Mr Lone are

related to plus the children of only his wife are therefore 12. Nine plus the children of only his wife is therefore 12. Her children only are therefore three. In the same way we see that Mr. Lone's children only are also three. The children from their previous marriages are therefore six.

Therefore six new children were born after they got married to make the total 12.

82.0 Answer to Peter and the hardware shop

Peter bought street numbers.

83.0 Answer to the murderous sister

The two sisters were Siamese twins.

84.0 Answer to the product of a series

The answer is zero. Eventually the factor (X-X) will be reached, which is zero and zero times anything stays zero.

85.0 Answer to sending valuables

John puts a lock on the box with the watch inside and sends it over to Berto. Berto put one of his locks on the box and sends it back to John. John takes off his lock and sends the box back to Berto. Berto opens the box with the key of his lock.

86.0 Answer to inheriting his fortune

Hint: Who must be the slower, the two sons or their camels?

Answer: Switch camels.

87.0 Answer to what time is it now

Let the time now be x and let the time until midnight be y.

Therefore Midnight minus the time two hours from now is half of y.

24 - (x+2) = t/2

Midnight minus the time one hour from now is y.
Therefore 24 - (x+1) = t

Therefore -(-1) = t/2, so that t=2

This gives x then as 24-(x+1)=2, so that x=21

It is therefore nine o'clock now.

88.0 Answer to the jailbird

Hint: He played a game.

Answer: He was playing Monopoly.

89.0 Answer to falling off the ladder

Hint: How high up the ladder was he?

Answer: He was on the bottom rung of the ladder.

90.0 Answer to move the coin

Hint: Pick up the top coin.

Answer: Move either the top or bottom coin and place it on top of the intersecting coin.

91.0 Answer to it moved

Hint: Read the question without the jungle part.

Answer: Ever heard of a coin.

92.0 Answer to the lost Soldier

Hint: The distances are directly proportional to the number of letters of each town.

Answer: The number of letters of each town times four is the distance from the crossing to that town. Paarl has 5 letters and the distance is therefore 5 times 4 and that makes 20.

93.0 Answer to how many pages

Pages 1 to 9 have one digit each, totalling up to 9 digits.
Pages 10 to 99 have two digits each, totalling up to 180 digits.
Pages 100 to 999 have three digits each, totalling up to 2700 digits.
This adds up to 2889 digits.
We still need 2989-2889 digits, which are 100 digits.
Pages upward from 1000 have four digits each. We therefore need 25 more pages to make up the 2989 digits.
Now 999+25 make 1024. Our book therefore has 1024 pages.
The book therefore contains 512 recipes.

94.0 Answer to Farmer Brown

The answer is 'no' of course. Even if we start with zero seeds for the firs pocket and increase each pockets' seeds with one seed we still end up with 45 which is one more than 44. (0+1+2+3+4+5+6+7+8+9)

95.0 Answer to the not so bright jeweller

Hint: Does the jeweller really have to link six chains?

Answer: Open all the links of one chain. That gives us 5 open links to link the other 5 chains. Doing the procedure in this manner will result in the linking of five chains and not six. The transaction will therefore cost R25 and not R30. Ernie was therefore right.

96.0 Answer to the Queen that could not sleep

Hint: It's something like treason.

Answer: BETRAYAL

97.0 Answer to choosing socks

Al has to take three socks out of the drawer.
Let black be B and let white be the letter W. Combinations of three socks are then as follows.
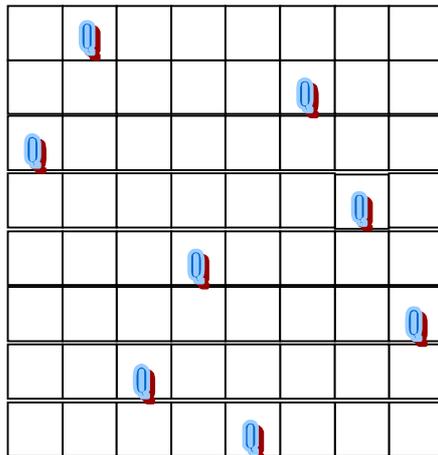
B B B

B B W

B W W

W W W

We see that there will always be a pair of matching socks, no matter what socks Al pulls out of the drawer.

98.0 Answer to the classic 8 Queens problem

99.0 Answer to correcting the equation

It is possible to move a part. Take one line of the equal sign and place it above the minus sign so that the minus sign now becomes an equal sign. The equation then becomes 62 = 63 - 1

Repositioning a digit is also possible. Take the 6 of 62 and place it to the right and slightly above the 2 of 62. The equation then becomes 2 to the power of 6 minus 63 is equal to

one.
As we all know 2 to the power of six is 64 and 64 minus 63 is
surely one.

The result on the board will be $2^6 - 63 = 1$

100.0 Answer to up and down the chimney

Hint: It's raining and I am getting wet.

Answer: Umbrella

101.0 Answer to the two masked men

Hint: This is an American game.

Answer: Pete saw the Umpire and the ball catcher. The game is
Baseball.

102.0 Answer to the sad and true riddle

Peace.

103.0 Answer to sold, bought and used

Hint: Nearly the same as life insurance.

Answer: Coffin.

104.0 Answer to how many spots on the Dalmatian

Hint: Use the formula spots = 36*number + 15 where number is
zero or bigger than zero.

Answer: Substituting two in the place of number results in Dal having 87 spots.

105.0 Answer to the Palindrome

Hint: Madam was a hint.

Hint: Eden was a hint.

Hint: Adam was a hint.

Answer: Madam in Eden, I'm Adam.

Another answer: Madam, I'm Adam.

106.0 Answer to using all the digits

927 x 63 = 58401

107.0 Answer to the parking lot

If R parks in spot 4 then Q parks in 1, 2 or 3.

Going on with this type of logic, we could write down the following table showing where the cars will go.


```
Q  R  S  T  U  V
1  4  6  2  3  5
2  4  3  6  1  5
3  4  6  2  1  5
```

We see in all instances that car V must park in spot 5.

108.0 Answer to snakes and diamonds

The slave closed the lid, turned the box upside down, then opened the lid a fraction just big enough for the diamond to drop out, but too small for the snake to get out.

109.0 Answer to painting the cube

Paint the top with say blue and then the bottom has five different colours to choose from. Then we still have four colours to paint the sides with. Let's number the paints for the sides from one to four. The different combinations are then as follows.

```
1  2  3  4
1  2  4  3
1  3  2  4
1  3  4  2
1  4  2  3
1  4  3  2
```

The combination 2341 may also look valid, but it is the same as 1234. We therefore have six combinations for the sides. The six combinations of the sides and the five combinations of the bottom therefore give us 30 different combinations.

110.0 Answer to pair of rabbits

Let us suppose that Pete's birthday is January 1. It really does not matter.
Let us denote a newly born pair with N, and a mature or pregnant pair with P.
We can then make a table of how things proceed. This table shows the number of pairs at the start of each month.

```
January:        1N              = one pair
February:       1P              = one pair
March:          1P + 1N         = 2 pairs
April:          2P + 1N         = 3 pairs
May:            3P + 2N         = 5 pairs
June:           5P + 3N         = 8 pairs
July:           8P + 5N         = 13 pairs
August:         13P + 8N        = 21 pairs
September:      21P + 13N       = 34 pairs
October:        34P + 21N       = 55 pairs
November:       55P + 34N       = 89 pairs
December:       89P + 55N       = 144 pairs
January:        144P + 89N      = 233 pairs
```

Little Pete's collection of rabbits has therefore grown to 233 pairs in one year. The series demonstrated here is also called the Fibonacci series, named after the man who first observed it. The next number in the series is simply the sum of the two previous numbers.

111.0 Answer to Palindrome two

Hint: One times one is equal to one.

Hint: 11 x 11 = 121

Answer: 111111111 x 111111111 = 12345678987654321

112.0 Answer to the big deal

Let us suppose that partner one tells the truth. Then partner two must be telling the truth. This however cannot be, because he says that only one person is telling the truth. Therefore partner one lies.
If partner two is telling the truth, then he himself must be the person he is speaking of. Partner three therefore cannot tell the truth. He is therefore lying when he says that the second partner is telling the truth. Partner two is therefore also lying.
If partner three is telling the truth, then partner two must also be telling the truth, but this is not so and partner three is therefore also lying.
All three partners are therefore lying through their teeth.

113.0 Answer to what next

Hint: Think about this monthly.

Answer: S.30 for September 30.

114.0 Answer to the sack of potatoes

The solids weighed 1% in the beginning, because 99% was water. 100% weighed 100kg and the solids therefore weighed 1kg. After the potatoes were left in the sun 98% was water. 2% must therefore have been solids. 2% is therefore 1kg so that 100% is therefore 50kg.

115.0 Answer to the ten digits number

6 2 1 0 0 0 1 0 0 0

116.0 Answer to More or less

Let us denote U for Unchas, P for Potchas and N for Nonchas.

We know there are 100 fruit, so that P + U + N = 100.

Also let us denote > for more than and < for less than.

We also denote 2 times P as 2P and we do this with everything written as something times something else.

Then we have that: N > 2P
                    3p > 4U
                    3U > N

Now for some maths!

P = 100-U-N

2P= 200-2U-2N

N > 2P = 200-2U-2N

N > 200-2U-2N

3N > 200-2U

9U > 3N > 200-2U

9U > 200-2U

11U > 200

U > 200/11 = 18.1818181818...

U > 18

But we also have that 3P = 300-3U-3N

And that 4U < 3P = 300-3U-3N
4U < 300-3U-3N
3N < 300 -7U
8U < 6P < 3N < 300 -7U
8U < 300 - 7U
15U < 300
U<20

But 18<U<20 and therefore U=19.

3U>N and thus N<57. We also have that 3N>200-2U and so N>54.

Thus N is either 55 or 56.

Choose N as 55. Then P=26 because N+P+U=100

Also then N>2P because 55>52 and 3P>4U because 78>76 and 3U>N because 57>55.

The number of Nonchas is then 55, the number of Unchas is 19 and the number of Potchas is 26.

117.0 Answer to Ahmed the Fruit seller's weights

Ahmed uses a one, three and nine kg weight. He uses both sides of the scale, putting the weights in such a manner as to balance the scale. For example if he wants to weigh 2 kg, he puts the one kg with the fruit on the one side and on the other side he puts the three kg weight.
Following a table demonstrating the principle. The left side is the weight to be measured and the right side Ahmed's weights. Note that the negatives describe the weights that should also be on the left.

1 = 1
2 = 3-1
3 = 3
4 = 3+1
5 = 9-3-1
6 = 9-3
7 = 9+1-3
8 = 9-1
9 = 9
10 = 9+1

```
11 = 9+3-1
12 = 9+3
13 = 9+3+1
```

118.0 Answer to Picasso's painting.

Let us suppose that Dirk started out with R100. Then he spent R70 on the painting. He therefore had R30 left. He got R80 by selling, which left him with R110. He then paid R90, which made him worth R20. He again sold the painting for R100 so that he had R120 in the end. He started out with R100 so he made a profit of R20. Actually quite easy to figure out!

119.0 Answer to my father, my uncle and I

Let my father be xy. Then my uncle must be yx. We could also write it as follows.

Father = 10x + y   (10x means ten times x)
Uncle = 10y + x
Father - Uncle = 2me (2me means 2 times my age)
5Father - 5Uncle = 10me = Uncle
5Father = 6Uncle   (5 times my father's age is equal to 6 times my uncle's age)
5father = 50x+5y
6uncle = 60y+6x
50x+5y = 60y+6x
44x = 55y
4x = 5y
It follows then that x=5 and y=4. My father is therefore 54, my uncle 45 and I am 4 and a half years of age.

120.0 Answer to how many squares on a chessboard

A chessboard has eight columns and 8 rows.
Let us look at boards with less rows and columns and from what we learn then deduce the outcome for the chessboard.

A 1x1 board has 1 square
A 2x2 board has 4+1 = 5 squares
A 3x3 board has 9+4+1 = 14 squares
A 4x4 board has 16+9+4+1 = 30 squares = 4x4 + 3x3 + 2x2 + 1x1.
.
.
An eight by eight board has 64+49+36+25+16+9+4+1 = 204 squares

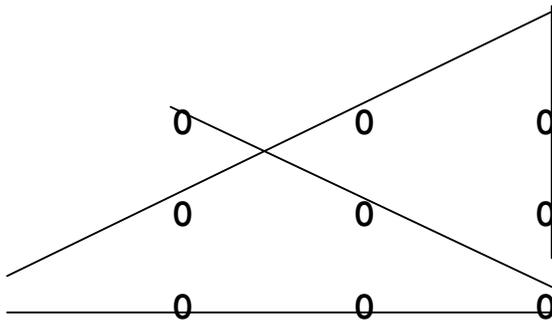### 121.0 Answer to complete the sequence

The answer is 25+13+25 = 63

122.0 Answer to the odd character

The odd character out is Z. Z is no chemical element.

123.0 Answer to Occurrence

The letter m is the answer.

124.0 Answer to connect the dots

125.0 Answer to a logic conclusion

4.0 is true. Yellow apples are fruit.

126.0 Answer to the Farmer's sheep

```
Let us determine x if he has x sheep.
Then a third of his sheep is x/3
A fifth of his sheep is x/5
3 times the difference of the above is 3(x/3 - x/5)
A hundred sheep are in the fields.
Then the sum of the above is x
Therefore x = x/3 + x/5 + 3(x/3 - x/5) +100
x = 8x/15 + 6x/15 + 100 = 14x/15 + 100
15x = 14x + 1500
x = 1500
```

It follows then that Koos has 1500 sheep.

127.0 Answer to the will of bachelor Barnie

All together the wives got R3960. Therefore Hanlie + Ilse + Marise is R3960. But Ilse is Hanlie - 100 and Marise is 100 + Hanlie. Therefore Hanlie + Hanlie -100 + 100 + Hanlie is 3960. Three times Hanlie is therefore R3960. Hanlie thus got R1320. Marise got R100 more, which is R1420. Ilse got R100 less than Hanlie, so she got R1220.

The men got R10000 - R3960 = R6040.
We now have to pair the men with their wives.
If we choose Johannes to be Ilse's husband we have that he received R1220. If we choose Calla to be married to Hanlie he received 1.5 times his wife's share which is R1980. Alfred then must be married to Marise and he received twice the amount of his wife, so he got R2840. These three amounts add up to R6040 exactly and our assumptions therefore must have been right.

128.0 Answer to father and son

Let my age be x and my son's age be s.

Let the age that I had be x-c

Then s + 15 = x - c

and x - c = 8(s-c)

and x + (x+(x-s)) = 31(s-c)

Out of the three equations we get my age as 60 and my son's age as 25.

129.0 Answer to the unequal balance

Let the bread's weight be z
Let the length of the two hands be x and y.

Then zx = 3y/8 and 6x = zy
Then z/6 = 3/(8z) so that z^2 = 18/8 = 2.25
Therefore z = 1.5
The weight of Niek's bread is therefore 1.5kg.

130.0 Answer to riddle

Nothing!

131.0 Answer to the blue Pub

The answer is the number of letters in the number he put to you.
The answer to four is therefore 4, because four has 4 letters.

132.0 Answer to the impossible equation

$$1 = \sqrt{1}$$

133.0 Answer to Passed from fathers

Name.

134.0 Answer to day of the week.

Let's first list all the statements in terms of today.

Albert: Today is Monday.
Bertus: Today is Wednesday.
Charl: Today is Tuesday.
Danie: Today may be Thursday, Friday, Saturday or Sunday.
Eric: Today is Friday.
Fanie: Today is Wednesday.
George: Today may be Saturday Monday, Tuesday, Wednesday, Thursday, Friday or Saturday.

Because only one statement is true, days that are repeated in two or more statements may not be today. The only day not repeated is Sunday. Today must therefore be Sunday.

135.0 Answer to the Safari

D is the right answer. Callie only had to outrun Mike. The lion would then go for Mike the nearest to him.

136.0 Answer to the corner numbers

1	7	6
10		21
9	24	15

1	16	15
21		17
20	22	2

137.0 Answer to ten digits

ABC is 140 because 140 - 2 - 3 - 5 - 6 - 7 - 8 - 9 = 100

138.0 Answer to how many snakes

Six wings means 3 birds. Six bird legs plus 4 times the rabbits plus 4 times the cats are 38 legs. Therefore 4 times the rabbits and four times the cats is 32. Therefore the cats and rabbits are 8. The snakes plus the birds plus the cats plus the rabbits are 15. Therefore the snakes plus 3 plus 8 are 15. The number of snakes is therefore four.

139.0 Answers to sneaky riddles

1. A secret.
2. Your breath.
3. Silence.
4. Fire.
5. Footsteps.
6. A river.
7. Your word.

140.0 Answer to my cat

No cat has two tails. One cat has one more tail than no cat. Therefore one cat has three tails.

141.0 Answer to keeping the dogs at bay

This is as far as I know the only solution. None other has ever been found.

	D	D		
	D			D
				D
C				
C			C	

142.0 Answer to dividing into parts

Let the parts be A, B, C and D. Then $A/4 = 4B = c+4 = D-4 = N$
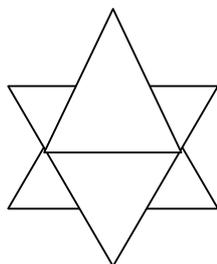
We know $A + B + C + D = 400$

Then 4N + N/4 + N–4 + N+4 = 400

6N + N/4 = 400 so that 25N = 1600 so that N=64

The parts are therefore 256, 16, 60 and 68.

143 Answer to the Star of Dawid

Explanation of Mathematical Terminology

If you don't like mathematics skip this.

In Algebra we use alphabetical letters to describe an unknown quantity and we **hope** by manipulation of these letters to get the answer.

For instance when we say, what plus 3 are 8, we know it is 5. We could also have said that if x+5 = 8, what is x? In this instance x is the unknown quantity or the placeholder for the number that should have stand in the place of the x.

Observe the following meanings and how we write it.

x - 2 means x minus 2; if x is 3 then x - 2 is also 3 -2 which is 1

xy means x times y , if x is 3 and y is 4 then xy is 12

x/y means x divided by y , if x is 10 and y is 2 then x/y is 5

x^2 means x times x or x to the power of two , if x is 3 then x^2 is 9

x.y means x times y

a (b+c) means a times the total given by b plus c , if a=2, b=3 and c=4 then a(b+c) = 2(3+4) = 2 times 7 = 14

2y means two times y

3wd means 3 times w times d

2 times 3y is 6y

6y divided by 5 is 6y/5

Some definitions

x + 0 = x

0x = 0 times x = 0

1x is 1 times x and we write it as x, so that
1x = x as 1 times 6 = 6

x+y = y+x as in 3+4 = 4+3

xy =yx as in 3 times 4 = 4 times 3

x/x = 1 as in 4 divided by 4 is one

x/1 = x as in 6/1 is 6

0/x = 0 as in 0 divided by 10 is 0

a+(b+c) = (a+b) + c
We always do the calculation in the brackets first as in
1+(2+3) = 1+5 = 6

a(b+c) = ab + ac

(a+b)(c+d) = ac + ad + bc + bd

x^n is x.x.x.x.x.x.x..... n times

x times -1 = -1x = -x

-x divided by -1 = x

-x/y = x/-y = -(x/y)

-x/x = -(x/x) = -1

a-b = -b + a = a + -b

Manipulation and solving of equations

The equal sign is like the midpoint of a balancing scale. What
is done on one side, must also be done on the other side to
balance the scale.

The main objective in equations is to get the unknown quantity
alone on one side. Usually the left side is used for the
unknowns as shown in the example below.

Example

If 2x - 4 = 6 we would like the x alone on one side by doing
the following

2x -4 +4 = 6+4; we plus both sides with 4 to get rid of the
left side four

2x = 10 reduced form of the above

2x/2 = 10/2 we divide both sides by 2

x = 10/2 = 5 reduced form and we are left with x

and we see that 2 times 5 - 4 is indeed 6

Example

10x -2x +6 = 4x + 8

8x + 6 = 4x + 8 reduced form of above

8x + 6 -6 = 4x + 8 - 6 add six to both sides to get rid of left side six

8x = 4x + 2 reduced form of above

8x – 4x = 4x –4x + 2 take 4x away from both sides to get right side without any form of x

4x = 2 reduced

4x/4 = 2/4 divide by 4 on both sides to get x alone

x = 1/2 = 0.5 reduced form

Manipulation of 2 simultaneous equations

We have that 2x + 3y =7 and that 4x – y = 12

We first manipulate the first equation to get x alone and then substitute that what we got into the second equation as follows

First equation
2x + 3y = 7

2x + 3y – 3y = 7 –3y minus 3y on both sides

2x = 7 – 3y reduce

2x/2 = 7/2 – 3y/2 divide by two on both sides

x = 7/2 – 3y/2 reduce

Now for the substituting

4x – y = 12 original second equation

4(7/2 – 3y/2) –y = 12 substitute the first into the second

 28/2 – 12y/2 –y = 12 multiply the 4 out with the ( )

14 – 6y –y = 12 reduce

14 – 7y – 14 = 12 – 14 minus 14 on both sides

–7y = -2 reduce

–7y/–7 = -2/–7 divide by –7 on both sides

y = 2/7 reduce

Now the first equation says that 2x + 3y =7

therefore 2x + 3(2/7) = 7 by substituting y=2/7

2x + 6/7 = 7 reduce

2x + 6/7 −6/7 = 7 −6/7

2x = 6 + 1/7

2x/2 = 6/2 + 1/7/2
x = 3 + 1/14

Examples of writing puzzles as mathematical equations

If we have that 3 times an unknown quantity of lemons plus 2 is
20, we substitute L for lemons and write it as follows.

$$3L + 2 = 20$$

where 3L means 3 times L.

L is therefore 6 so that 3 times 6 + 2 is 18 + 2 which is 20

I am twice as old as my son in two years .
I am 40 years old this year.

Let me be x years now and my son be y years now.

In two years I will be x+2 and my son will be y+2.

But I will also be twice his age. Therefore 2 times (y+2) = x+2

So that 2(y+2) = x+2

And 2y + 4 = x+2

And 2y = x − 2

So two times my son's age now is also two years less than my age
now.

Bibliography and Thanks

Most of the puzzles, brain teasers and riddles do not have
original authors. Most stories have travelled from person to
person and in most cases may also have changed in content.

In most cases the authors are therefore unknown to us.

We give credit to each and every person who might have had something to do with these puzzles. We do not claim to have thought out any of these puzzles. It is the work of others.

If we have used any of the puzzles against the will of any of the authors we sincerely apologise. We are indeed honoured to have had the opportunity to read such excellent mind matter.

We will be glad to include any of the authors not mentioned on the Internet sites in our next edition.

1. Mathematics for all - ODhams Press Limited 1963

2. Mathematics and the Imagination by E Kasner and J Newman Computability: Computable Functions, logic and the foundations of mathematics by Epstein and Carnielli

3. Internet: http://playground.idv.nl/speel/

4. Internet: http://mirror.wwa.com/math/archive/

5. Internet: http://www.botree.com/bender/

6. Internet: http://www.folkart.com/puzzle/

8. Internet: http://www.bcit.bc.ca/~bis/dduffy/

9. Internet: http://www.drblank.com/stadmath.htm#newpuzzle

10. Internet: http://www.focus-asia.com/home/k_y_l/

11. Internet: http://members.iquest.net/~ramsey/

12. Internet: http://www.geocities.com/hotsprings/4761/

13. Internet: http://www.mayo-ireland.ie/mag/entain/

14. Internet: http://www.primenet.com/~brendel/

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