

## Note to users:

This is a booklet I have complied partly from (free) internet resources and partly from my own imagination. So no copyright issues there – I think.

It was designed for my year 8 tutor group who have social and behavioural problems, it aims to get them to work together to talk over various problems / dilemmas / puzzles.

So far it is working well and the positive relationships are building.

Have fun!

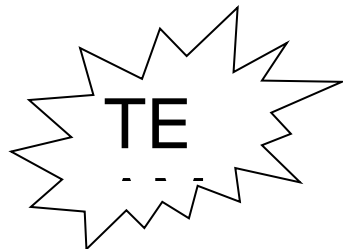
# Challenge Booklet



Name \_\_\_\_\_

The idea of this booklet is to improve:

Behaviour  
Communication  
Teamwork  
Confidence  
Listening skills  
Thinking skills



## Rules:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

My target is to.....



## Cat and Mouse

Five mice — Mindy, Marty, Muriel, Mabel, and Mike — were nibbling the cheese on the kitchen table, but Whiskers the cat chased them back into their hole. Muriel Mouse made it back third, and Mike Mouse was fourth. Mabel Mouse was after Mike, and Marty Mouse was not second. Which mouse was first, and which was last?

1<sup>st</sup>:

5<sup>th</sup>:

### 1. Fast Food

Sally, George, and Frank were picking up their fast-food orders — a burger, a plate of fries, and a slice of pizza. "Who ordered what?" asked the man at the counter. George said, "I didn't order the pizza." The boy who ordered the fries said, "Oh, I thought you did." That was all the man at the counter needed to know. Who got each order?

Sally:

George:

Frank:

### 3. Find the three-letter word

Find a familiar English three-letter word, using the following information:

1. RED has no common letter with it.
2. END has one common letter, but not in the correct place.
3. TIN has one common letter, in the correct place.
4. TIP has one common letter, not at the correct place.
5. AIR has one common letter, not at the correct place.

\_\_\_\_\_

### 4. The three little pigs

The three little pigs, as you know, built houses — one of straw, one of sticks, and one of bricks. By reading the six clues, figure out which pig built each house, the size of each house, and the town in which each house was located. Use a chart to keep track of your information and your logic.

	TOWN	SIZE	MATERIAL
Patricia Pig			
Penny Pig			
Peter Pig			

1. Penny Pig did not build a brick house.
2. The straw house was not medium sized.
3. Peter's house was made of sticks, and it was neither medium nor small.
4. Patricia Pig built her house in Pleasantville.
5. The house in Hillsdale was large.
6. One house was in a town called Riverview

## 5. Trip to the Zoo

Dan, Jen, Keith, and Mia are having an argument about which animals to visit first at the zoo — the deer, the lions, the leopards or the giraffes. Each kid wants to see his or her favourite animal first. Dan is allergic to cats, so he doesn't like animals that are in the cat family. Jen's favourite animal doesn't have horns. Keith doesn't care for animals that have spots. Mia disagrees with both Dan and Keith. Which is each kid's favourite animal?

	deer	lion	leopard	giraffe
Dan				
Jen				
Keith				
Mia				

The tip is to think outside of the box!

Here is an example:

**Question:** A girl who was just learning to drive went down a one-way street in the wrong direction, but didn't break the law. How come?

**Answer:** She was walking.

See if you can let your brain switch directions to answer these questions:

6. How can you throw a ball as hard as you can and have it come back to you, even if it doesn't hit anything, there is nothing attached to it, and no one else catches or throws it?
7. Two students are sitting on opposite sides of the same desk. There is nothing in between them but the desk. Why can't they see each other?
8. There are only two T's in Timothy Tuttle. True or false?
9. One day, two mothers and two daughters went shopping for shoes. Their shopping spree was successful — each bought a pair of shoes, and all together, they had three pairs. How is this possible?
10. How much dirt is in a round hole that is 9 feet deep with a diameter of 3 feet?
11. How many are going to St Ives?

This is a very old rhyming riddle. See if you can answer it by reading and thinking very carefully.

*As I was going to Saint Ives,  
I crossed the path of seven wives.  
Every wife had seven sacks,  
Every sack had seven cats,  
Every cat had seven kittens,  
Kittens, cats, sacks, wives,  
How many were going to Saint Ives?*

12. He's my son!

A boy and his father are injured in a car accident. Both are taken to a hospital. The father dies at arrival, but the boy lives and is taken to surgery. A grey-haired, bespectacled surgeon looks at the boy and says, "I cannot operate on this boy -- he's my son."

How is this possible?

13. Mary's Father

Mary's father has 4 children; three are named Nana, Nene, and Nini. So what is the 4th child's name?

14. What are they?

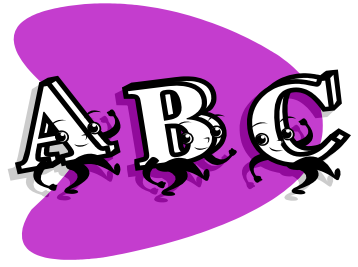
The more you of them you take, the more you leave behind.

15. Hahaha hehehe!

Where do fish keep their money?



## Letter and Word Games



### 16. In Common

What is the one thing shared by all three items in the same group?

<b>A</b> a cow a shoe a person	<b>B</b> a banana a drum a bear
<b>C</b> a zip a shark a comb	<b>D</b> a hill a person a measurement
<b>E</b> a needle a hurricane a target	<b>F</b> a river a person a cave

A: \_\_\_\_\_ B: \_\_\_\_\_ C: \_\_\_\_\_

D: \_\_\_\_\_ E: \_\_\_\_\_ F: \_\_\_\_\_

What do all of these have in common? \_\_\_\_\_

### 17. Next.....?

Each letter below stands for the name of something. What should the last three letters be?

M V E M J S ? ? ?

## 18. Animals in hiding

There is an animal hiding in each sentence below. Can you find the animals? When you find them underline or highlight.

Example: There's a bee in "I'll be eleven next month." Hint: You'll have to look in three words to find some of the animals.

1. We can go at six o'clock.
2. It's nice to do good deeds.
3. Take soap and a towel.
4. Most rich people wear fancy clothes.
5. You can keep the watch or sell it.
6. Use a ladder.
7. It will be a rainy day.
8. I came late.
9. Tell me if I should start now.
10. Will a map help you?

## 19. Colourful language

The first word in each expression below is a colour. The second word, when unscrambled, completes a common term associated with the colour.

For example, WHITE + ESLA = WHITE SALE.

1. BLUE + DOBOL
2. ORANGE + WOBL
3. BLACK + TREAMK
4. GRAY + TAMTER
5. PURPLE + THREA
6. WHITE + DEDGIWN
7. RED + TARCEP
8. YELLOW +REFEV
9. GREEN + RNGIFE
10. BROWN + DBAER

## 20. Just in Time

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

21. Crack the code

After school on Monday, Jody found this note in code taped to her locker.

Yg ctg jcxkpi c uwtrtkug rctva hqt Ou. Dtqyp.

At first, she couldn't figure it out. Then someone whispered in her ear, "M stands for K and W stands for U." Just those two clues helped Jody crack the code. Can you crack the code, too? How?

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

K

U

The message says:

22. I AM \_ \_ \_ \_ \_

Figure out the six-letter word that completes the title of this puzzle. You'll find all six letters by solving the sentences below.

1. This letter is in *cable* and *babe* but not in *tread*.
2. This letter is in *irony* and *train* but not in *nimble*.
3. This letter is in *avocado* and *vacant* but not in *visit*.
4. This letter is in *chair* and *rail* but not in *camera*.
5. This letter is in *night* and *thinker* but not in *thick*.
6. This letter is in *xylophone* and *yellow* but not in *allowance*.

23. Hinky Pinkys?

Hink pinks are one-syllable words that rhyme; hinky pinkies are two-syllable words that rhyme; For example, what's a hinky pinky for a humorous animal with long ears? Answer: funny bunny. Try these:

1. What's a hink pink for an obese feline?
2. What's a hinky pinky for an improved written communication?
3. What's a hinky pinky for turbulent sauce?
4. What's a hink pink for something you see that glows?

## 24. Anagrams

Change these words around to make other words

**LINE    WENT    BELOW    RING    CARE    LOOTS**  
**ABLE    TONES    RULE    DOOM    LOAF    SNAIL**  
**DAWN    MITE    SKIN    LOOP    MANOR    LAME**

## 25. Boggles

E	J	O	M
G	I	H	K
N	A	C	L
Q	B	E	U
Z	D	O	S

A	F	N	R
S	Q	I	L
N	A	C	P
E	O	E	U
X	H	O	S

E	S	O	L
S	F	I	C
A	R	M	P
H	Y	T	B
G	D	O	U

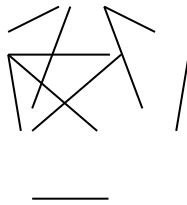
G	W	E	R
Y	U	I	P
A	S	D	D
S	J	K	V
N	O	O	E



## Maths and Number Challenge

26. How many?

Take a close look at the following figure... How many triangles can you find?



27. Handshakes

- a) If you have **TWO** people in a room and each person shakes hands with every other person exactly once, how many total handshakes happen?
- b) If you have **THREE** people in a room and each person shakes hands with every other person exactly once, how many total handshakes happen?
- c) If you have **FOUR** people in a room and each person shakes hands with every other person exactly once, how many total handshakes happen?
- d) If you have **FIVE** people in a room and each person shakes hands with every other person exactly once, how many total handshakes happen?

28. What comes next?

What number comes next?

**1, 3, 6, 10, 15, 21, \_\_\_\_**

29. Planting Trees



You just bought TEN trees...  
You want to plant them in FIVE rows with FOUR trees in each row.  
How are you going to do it?

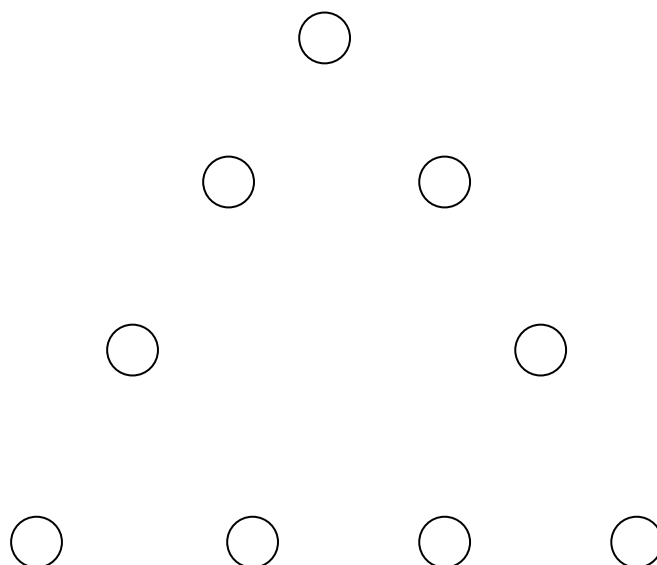
Hint: Try different shapes

Draw your plan below

30. Number Bubble

Put the numbers in the bubbles so that each edge adds up to the same thing.

1, 2, 3, 4, 5, 6, 7, 8, 9



31. We will cross that bridge when we get to it.....

Four people have to cross a bridge... It's very dark and they only have one flashlight... They can't make it across without some light.

No more than two people can cross at a time.

Phil can cross the bridge in 1 minute.

Karen can cross in 2 minutes.

Stinky can cross in 5 minutes.

Bubba can cross in 10 minutes.

How can they all get across in 17 minutes?

32. Cat down the well

A cat is at the bottom of a 20 foot well.

Each day, he climbs up 5 feet...

And each night, he slides down 4 feet.

How many days will it take him to reach the top of the well?

33. Numbers and words!

a) 26 = L of the A

b) 7 = D of the W

c) 101 = D

d) 365 = D in a Y

e) 3 = B M

f) 4 = W on a C

g) 28 = D in F

h) 11 = M in a F T

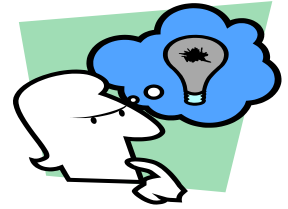
i) 4 & 1 = F and T

j) 6 = S on a D

34. Poor Farmer

A farmer has 17 sheep and all but 9 die. How many are left?

## Puzzling Puzzles



### 35. Moving Day

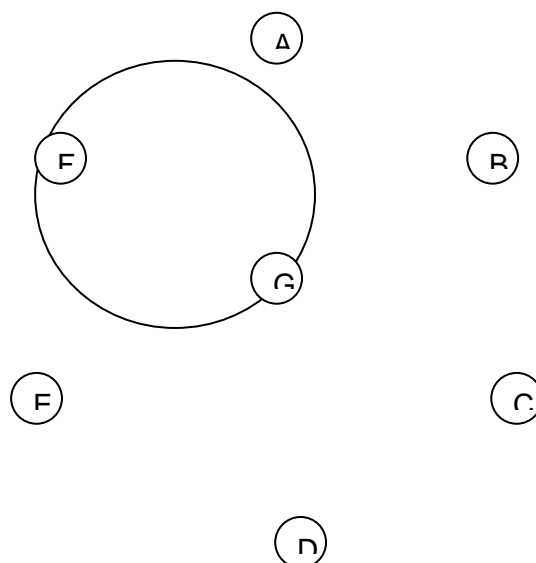
The Masters family is moving to a new house. They have a dog, a cat, and a pet mouse, but the animals don't get along in the car, so they can take only one at a time.

Then there are other problems. They can't leave the dog alone with the cat, because the dog chases the cat if no one is watching. And they can't leave the cat and the mouse together, because...well, you know what would happen if they did.

How can the Masters family get all three of their pets to their new house?

### 36. A Penny Piece

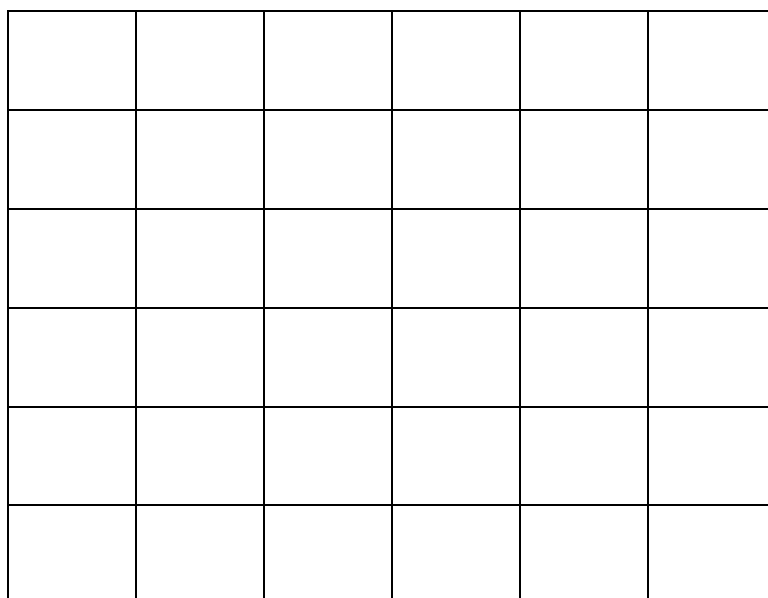
Divide the circle into sections by drawing three straight lines so that there is only one penny in each section.





### 37. Exactly Two

Place 12 pennies on the grid, one to a square, so that each of the six horizontals, each of the six verticals, and each of the two diagonals contains exactly two pennies.



### 38. Three moves

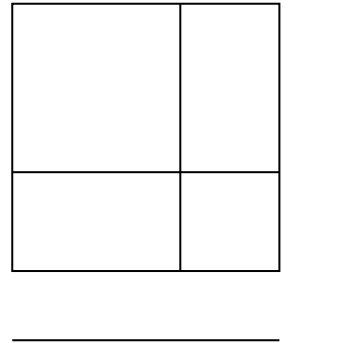
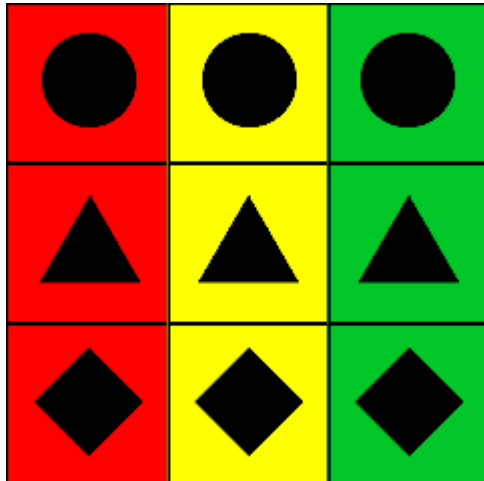
There are 10 letters in the triangle. Change the triangle so that it points down. Move one letter at a time. You have only three moves.

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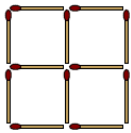
      A
     B C
    D E F
   G H I J
  
```

39. Rearrange the squares

Can you rearrange these squares so that each row and each column has exactly one of each colour and exactly one of each shape? (For example, you cannot have two red squares in a row... and you cannot have two triangles in a column.)



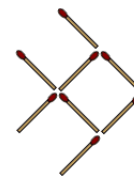
40. Matchstick Puzzles



- a) Remove two matchsticks to leave two squares
- b) Move two matchsticks to make six squares
- c) Move three matchsticks to make three equal squares

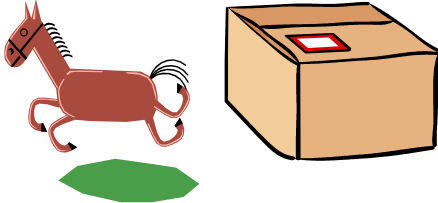
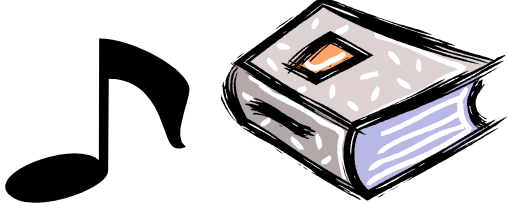


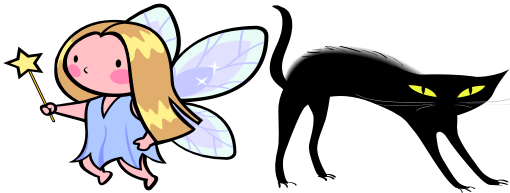
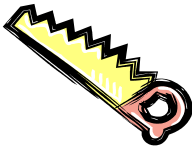
41. Turn the fish

Move three matchsticks to make  
The fish swim in the opposite  
Direction





## 42. DINGBATS

1 	2 
3 JUMP  JUMP	4 BAD <small>wolf</small>
5 	6 LOOK KOOL
7 emoclew	
9 	10 Cheers Cheers Cheers
11 C 	12 Mill1on

13

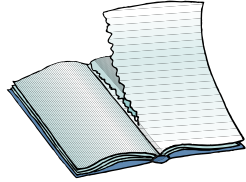


Tide  
Tide  
Tide

14

HEAD  
HEELS

15



16

thi

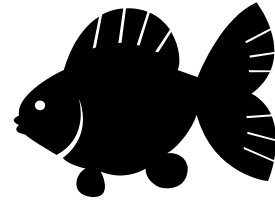


think

17

G G  
I O  
N

18



19



20

ONCE  
12oclock

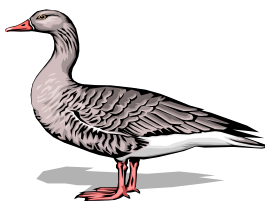
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ARREST  
YOU'RE

22



23



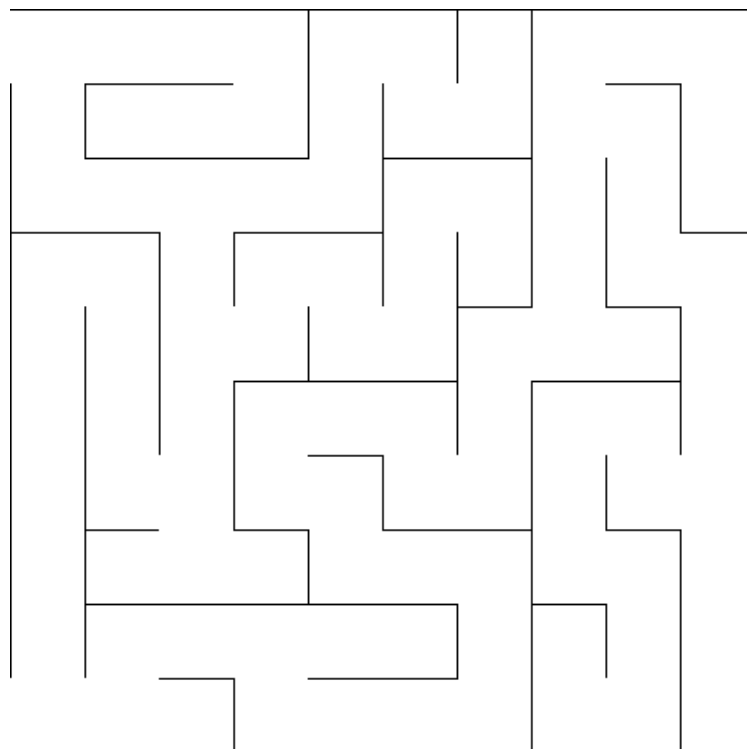
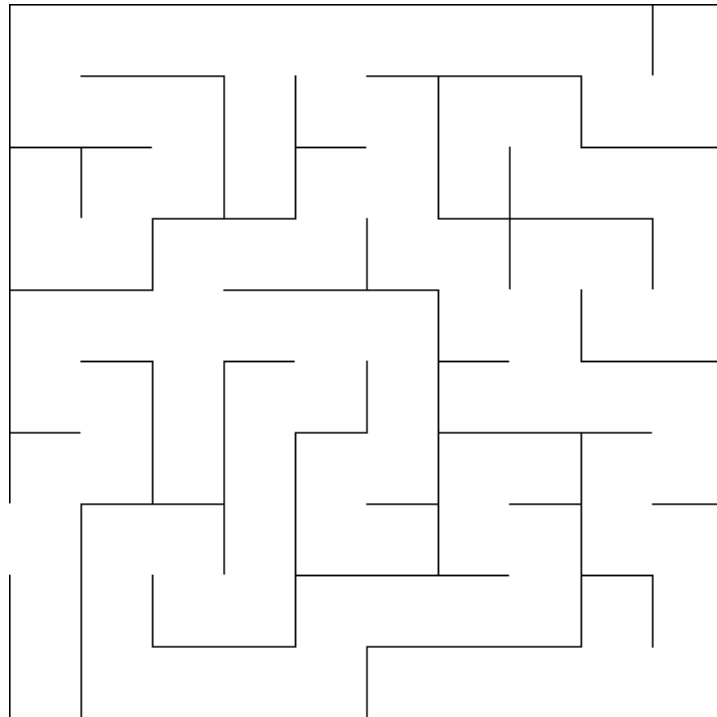
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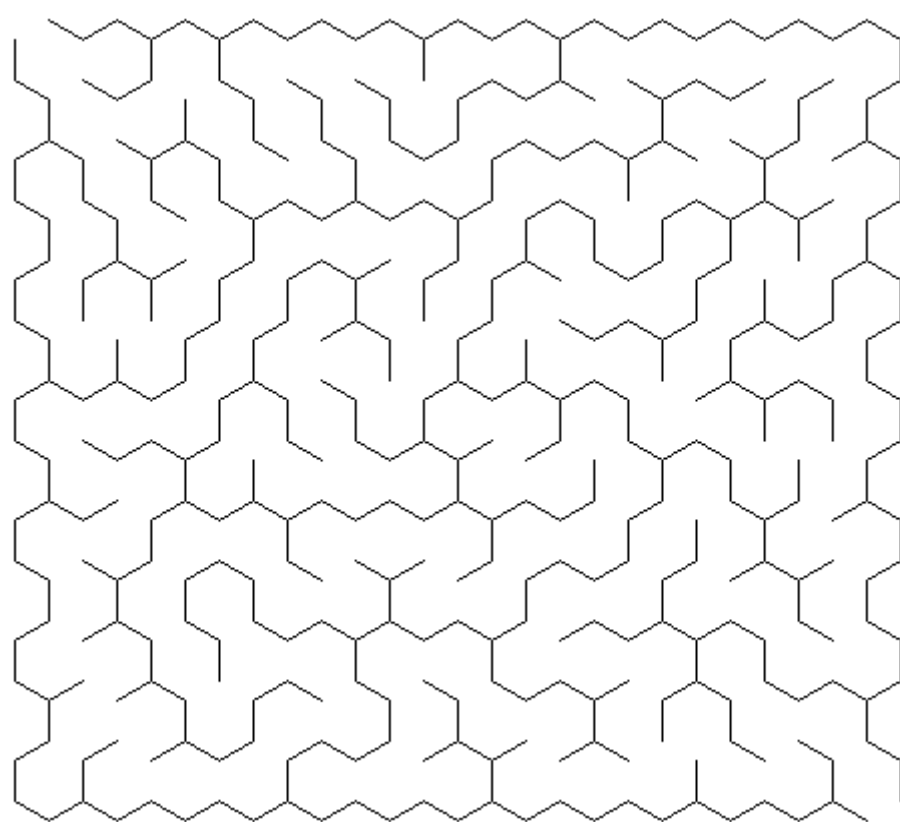
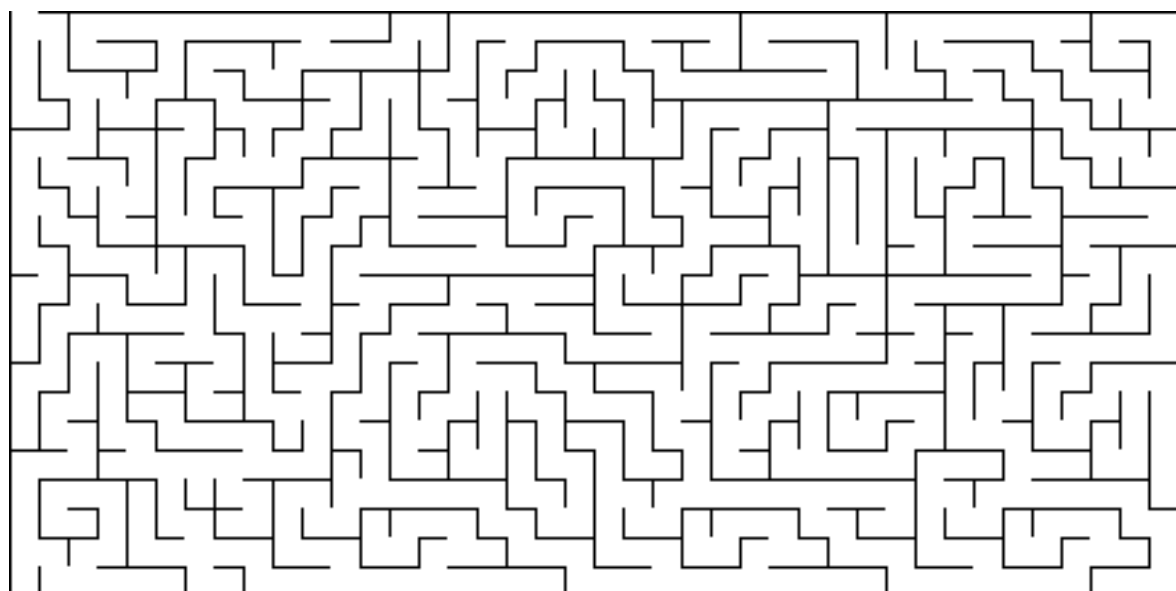
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wish



## 43. AMAZING MAZES







## 44. Sudoku

5					2
2	3	1			5
1	2	6	3	5	4
			6	2	1
6		5	2	4	
3		2			6

	d	e		b	a
c	a		f		d
			e	d	
e	c	d		a	
a	e	f	d	c	b
d			a		

		2	5	4	6
	4			1	3
	3	4	1		2
2	6			3	
	5		3	2	4
4		3	6		1

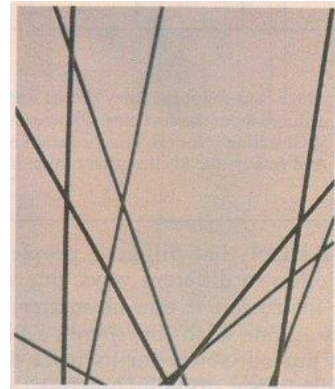
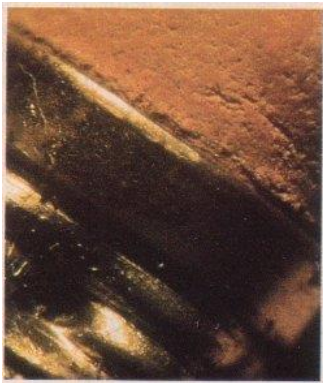
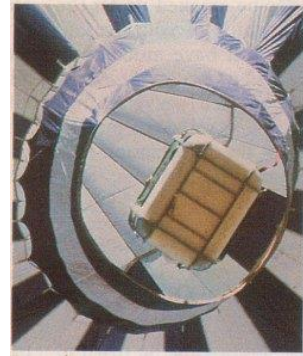
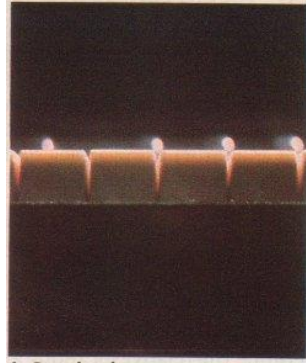
2		1	6		4
	6			2	
4		3	2		6
	2			4	
6	1		4		
	4			6	5



## 45. What is it?



Look at these close ups and decide what it is part of:







## Dilemmas

### 46. What is important?

You and your companions have just survived the crash of a small plane. Both the pilot and co-pilot were killed in the crash. It is mid-January, and you are in Northern Canada. The daily temperature is 25 below zero, and the nighttime temperature is 40 below zero. There is snow on the ground, and the countryside is wooded with several rivers criss-crossing the area. The nearest town is 20 miles away. You are all dressed in city clothes appropriate for a business meeting. Your group of survivors managed to salvage the following items:

- A mirror
- A small axe
- A loaded pistol
- Candles
- Newspapers (one per person)
- Cigarette lighter (no fluid)
- Extra shirt and trousers for each survivor
- 20 x 20 ft. piece of heavy-duty canvas
- A map
- One bottle whiskey
- A compass
- Family-size chocolate bars (one per person)

Your task as a group is to list the above 12 items in order of importance for your survival. List the uses for each. You **MUST** come to agreement as a group.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

## 47. Who is Important?

World War Three has occurred and nuclear bomb have made the air too poisonous to breath. Only 15 people survived in the whole of England.

The survivors have found a bunker containing

- sewage system
- water
- seeds
- clothes
- a few books
- some medical facilities but no operating material
- a greenhouse

The bunker will support 15 people for three years or 7 people for 7 years.

The air will become safe to breath in 6.5 years time – you must keep 7 people and leave 8 to die. Who will it be?

- 1: 'Ace' Browning
  - Single 59 year old man
  - Army veteran
  - Showing signs of mental illness
2. Geoff McGraw
  - 57 year old man
  - Plastic surgeon
  - grows his own veg
3. James Butler
  - 38 Year-old priest
  - Father of Rebecca
4. Carol Butler
  - 30-Year-old mother
  - Her hobbies include cooking and homecrafts
  - Rebecca's mother
5. Rebecca Butler
  - 10 year old girl
  - Epileptic
  - Bright Girl
6. Donald Heap
  - 45 year old man
  - Ex Olympic gold medallist – athletics
7. Sam Comfort
  - 26 Year old male nurse
  - Has been involved in studies into chemical and gas poisoning
8. Grace Hill  
(takes place of one person)
  - 23 year old woman
  - teacher
  - She is pregnant and has a 5 year old
9. Professor Chu
  - 49 year old male
  - Has discovered a cure for cancer

- 10. Phillipa Rice
  - 36 year old female
  - Outdoor adventure activity leader
  - Qualified in survival skills
- 11. Sarah Williams
  - 18 years old female
  - In a wheelchair
  - Doing a degree in counselling
- 12. Eric Robins
  - 30 year old male
  - Qualified plumber and electrician
  - History of a drugs problem
- 13. Liam Wade
  - 17 year old male
  - College student doing engineering
  - Criminal convictions
- 14. Tony Blair
  - PM of England
- 15. The Queen
  - The Queen!

Who will you save and why?

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Who wont you save and why?

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.



48.

These tasks will be done practically

- a) Build a Bridge – with the materials provided you must build a bridge strong enough to support a weight
- b) Get Arty – with the materials provided you must create a sculpture
- c) Egg Drop – you must create an egg package that would prevent the egg from breaking when dropped from a great height!
- d) Bottle neck – A logic problem: there is a coin in a corked bottle, you cannot smash the bottle or pull the cork out. How can you remove the coin?
- e) Radioactive waste – without touching it you must lift and move the bucket with the string provided
- f) Blindfold Obstacle course
- g) Call your partner – listening skills
- h) Get Knotted – a physical and teamwork challenge: tie as many knots in a rope as you can in a certain time period then pass it to another team to undo!

## 49. Discussion Page



Discussion Title:

My thoughts:

Group thoughts:

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Discussion Title:

My thoughts:

Group thoughts:

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Discussion Title:

My thoughts:

Group thoughts:

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Discussion Title:

My thoughts:

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Discussion Title:

My thoughts:

Group thoughts:

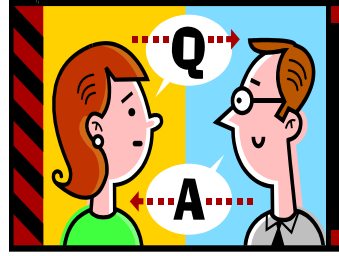
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Discussion Title:

My thoughts:

Group thoughts:





## QUIZ ANSWERS

Date:

Topic:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

Date:

Topic:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

Date:

Topic:

- 1.
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Topic:

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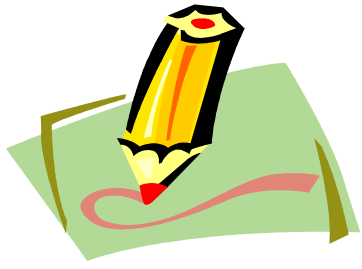
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Date:

Topic:

- 1.
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- 3.
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