Aptitude

**1** The number in each white cell in the grid below is obtained by performing an operation on the numbers in the grey cells corresponding to that cell.
For example, the number 46 is obtained by performing an operation on the two numbers 24 and 22 corresponding to it. Some of the cells have been filled in.

	11	22	33	44	55
12					67
24		46			
36					
48			?		
60	71				

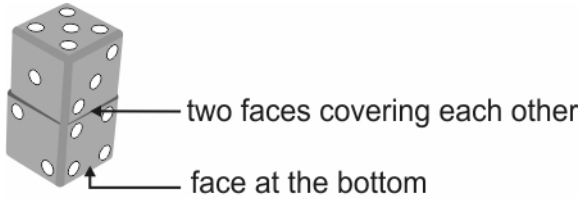What number will come in the place marked by '?'?

A 37

B 51

C 59

D 81

2 Shown here are 2 identical dice.
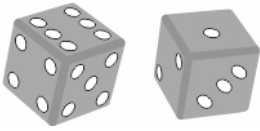
On a die,
- The number on the face opposite to 4 is 3.
- The number on the face opposite to 5 is 2.
- The number on the face opposite to 6 is 1.

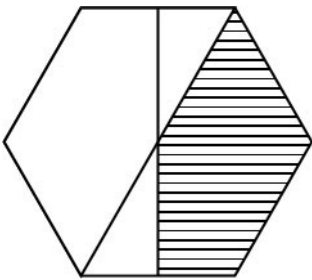Vidya kept one die over another as shown here.

— two faces covering each other

— face at the bottom

Two faces covering each other and the face at the bottom are hidden from the view.

What is the sum of numbers on these 3 faces?

A 7

B 9

C 10
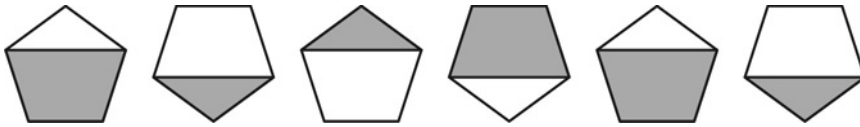
D 18

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3 What fraction of the hexagon shown here is shaded?

A ⅓

B ¾

C ⁵⁄₁₂

D ⁷⁄₁₂

4 Look at the pattern below.

What is the NEXT shape in the pattern?

A   B   C   D

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5 Nikhil was asked to find the sum of all numbers from 1 to 200. He has found a smart way of finding the sum.

He writes numbers upto 200 in increasing order as shown.

| 1 | 2 | 3 | . . . | 198 | 199 | 200 |

He then writes the numbers from 200 in decreasing order in the next line, as shown.

| 1 | 2 | 3 | . . . | 198 | 199 | 200 |
| 200 | 199 | 198 | . . . | 3 | 2 | 1 |

He notices that the sum of each column is 201.

	1	2	3	.	.	.	198	199	200
+	200	199	198	.	.	.	3	2	1
	201	201	201				201	201	201

Which of these gives the sum of all numbers from 1 to 200?

A 201 x 201

B 2 x 200 x 201

C adding 201 to itself 200 times

D adding 201 to itself 200 times and then divide the sum by 2

6 Kids use the internet for various purposes. To find out what kids do on the internet, 1000 kids, aged 9 to 17 were surveyed in 2000 and 2002. The results are shown in the graph below.
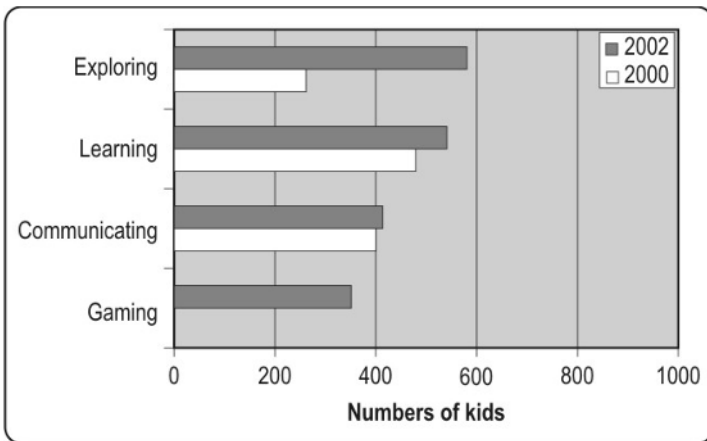
In 2000, what were most children using the internet for?

A exploring

B learning

C communicating

D gaming

██

1 What part of the following figure is shaded?
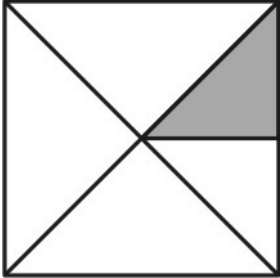
A $\frac{1}{4}$

B $\frac{1}{5}$

C $\frac{1}{8}$

D $\frac{1}{10}$

2 Aditi made the figure below using matchsticks.
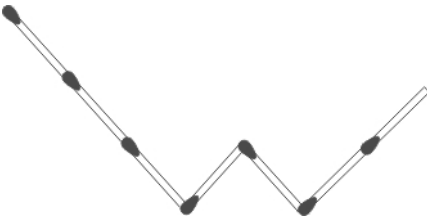
How many RIGHT ANGLES are there in the above figure?

A 3

B 2

C 1

D 0

3 (11133 - 11133) ÷ (204 × 306) is the same as

A 0.

B 204 × 306.

C a number greater than 204 × 306.

D (None of the above as we cannot divide 0 by a number.)

4 Ria cuts a watermelon first into quarters. She then cuts each quarter into halves. How many pieces of watermelon are there now?

A 2

B 4

C 6

D 8

5 Three students Anu, Rania and Samira were given these expressions and were asked to write down the number these represented.
Anu: 45 tens + 2 ones
Rania: 4 hundreds + 52 ones
Samira: 4 hundred + 52 tensWhich two girls have the same answer?

A only Anu and Samira

B only Anu and Rania

C only Rania and Samira

D All of them will get the same answer

6 How many hundred <u>ths</u> will make 3 ten <u>ths</u> ?

A 3

B 30

C 300

D 3000

7 The digits circled in the numbers below are replaced by 9. Which number increases the most?

7 9 8 (1)   (7) 4 5 6   4 5 (3) 2   3 (6) 7 2

A 7 9 8 1   B 7 4 5 6   C 4 5 3 2   D 3 6 7 2

8 What will be the remainder when 2351 + 1262 + 6170 is divided by 5?

(Hint: You need not actually divide.)

A 1

B 2

C 3

D 4

9 Which of these is equal to 2222?

A 22 hundreds + 22 tens

B 20 hundreds + 222 ones

C 2 thousands + 2 hundreds + 22 tens

D 2 thousands + 22 hundreds + 2 ones

10

The following table shows the TV schedule of a kids channel.

Film timing	
Chota Bheem	5:00 PM
Motu Patlu	5:30 PM
Little Krishna	6:00 PM
Mighty Raju	8:15 PM
Krishna Balram	9:00 PM
Chor Police	10:30 PM

'Chor Police' is a movie that lasts 2 hours and 15 minutes. Mittu watched this and went to sleep soon after that.
Which of these could be the time shown by her digital watch (which shows 24-hour time), when she went to sleep?

A 00:15

B 00:45

C 12:15

D 24:45

11 170 × 80 = 13600

What is 13600 ÷ 17?

(*Note: You need not do the actual calculation.*)

A 8

B 80

C 800

D 8000

12 Which of these could be 20 cm?

A the height of a tree

B the width of a book

C the length of an ant

D the height of a chair

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Mystery of the Missing Shoes

"I want to know who was responsible," Coach Bonn told the twins, Carrie and Carl. The twins were Laketon School's student detectives. "I had the class running on the tracks. When we came back, everybody's left shoe was missing. Never thought we needed to put our everyday shoes in the lockers. We just lined them up by the benches. They were **stashed** all over the room. Just found the last one. I wonder who could have done this."

"Did anybody from the class come back inside while you were out?" Carl asked. The coach nodded.

"Nathan, Trevor and Mike. I sent them to the sick room at different times because they were acting sick. They're still there."

The twins found the three boys in the sick room. "Did you hear what happened in the locker room?" asked Carrie.

All three said no. Carl explained, "Somebody messed up all the shoes that had been left inside."

Nathan said, "I bet the coach is quite angry. But I had nothing to do with it. I had a headache, so I came right here."

"I sure didn't do it," Trevor said. "I did pretend to be sick to get out of PE and took my time walking through the halls. I just didn't feel like running today."

Mike nodded. "I know Trevor couldn't have done it. He cannot tell the difference between left and right. I didn't do it because I really did feel sick. I hurried right to the nurse."

The next moment, Carrie and Carl told the coach, "We know who did it. It was Mike."

Are you a good detective? If yes, you saw that Mike was the only one who knew that the mystery had something to do with left and right shoes.

1 Where were the shoes kept before they went missing?

A in the sick room

B near the running tracks

C inside the lockers in the locker room

D along the benches in the locker room

2 What was the coach MOST LIKELY to be feeling when he informed the detectives about the missing shoes?

A ashamed

B confident

C curious

D threatened

3 Which of the following statements about Carl and Carrie is NOT supported by the story?

A Both of them are athletes.

B Both of them can solve crimes.

C Both of them share the same birthday.

D Both of them go to the same school as Mike.

4 **In the story, which of the following plays the MOST important role in finding the culprit?**

A the place where the prank was played

B the dialogues between the characters

C the time at which the prank was played

D the relationship between the characters

The Ratel and the Honeyguide

The Ratel, or the honey badger is known as the bravest animal on Earth. It is as big as a dog but can fight even leopards and tigers! The colour of its fur scares the animals and birds around it.

It pokes into any hole that comes in its way and searches for snakes in it. Poisonous snakes like cobra, mamba, puff adders, etc., are its favourite food. It also hunts for turtles, frogs, fish, lizards and mongooses.

It has tough and thick fur. It is also very agile. It can turn around and bite even if its opponent catches it by the collar.

Let us now introduce ourselves to its little friend. A tiny bird called the honeyguide is a great friend of the brave ratel.

The honeyguide has a special ability to find beehives. It loves to eat the wax with which the bees make their hive, but it is afraid of the bee stings. This is where the honeyguide needs help. The brave ratel also loves to eat honey but cannot search for the bee hives. The honeyguide knows this.

When the honeyguide finds a ratel, it comes close to the ratel and chirps. It fans its tail excitedly, showing its white feathers. The ratel notices this and begins to follow the honeyguide with a grunting and growling sound. The bird hops from tree to tree till it comes near the hive. Then she waits for the badger to reach the hive. The ratel breaks the hive apart with its strong claws. Its thick fur protects it from bee stings. It eats all the honey and leaves the wax for the honeyguide!

5 Based on the information in the passage, the honeyguide can be BEST described as being _____.

A hardworking

B generous

C fearless

D clever

6 Which parts of the ratel's body help and protect it when it takes honey from the hive?

A claws and fur

B fur and collar

C tail and claws

D collar and tail

7 According to the passage, why does the honeyguide make chirping sounds?

A to warn the bees

B to search for a ratel

C to scare away the bees

D to get the ratel's attention

8 This passage is MAINLY about _____.

A how two animals fight their enemies

B the physical qualities of two animals

C how two animals help each other

D the favourite food of two animals

The Quarrel

I quarrelled with my brother
I don't know what about,
One thing led to another
And somehow we **fell** **out** . (4)

The start of it was slight,
The end of it was strong,
He said he was right,
I knew he was wrong! (8)

We hated one another.
The afternoon turned black.
Then suddenly my brother
Thumped me on the back, (12)

And said, "Oh, come along!
We can't go on all night
I was in the wrong."
So he was in the right. (16)

Eleanor Farjeon

<u>Glossary:</u>

Thumped: gave a hard pat

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9 In which of the following is the phrase ' <u>fell</u> <u>out</u> ' used in the same way as in the poem?

 A The soldiers <u>fell</u> <u>out</u> of the battle field.

 B The wrestlers <u>fell</u> <u>out</u> of the boxing ring.

 C The children wanted to know how the story <u>fell</u> <u>out</u> in the end.

 D The members of the band <u>fell</u> <u>out</u> when some wanted more money.

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10 In the poem, what do lines 5 and 6 mean?

 A The quarrel had started and ended strongly.

 B Both the boys were not willing to end the quarrel.

 C Both the boys quarrelled very little over a big thing.

 D The quarrel was very small, but it became very serious.

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11 Why did the poet's brother thump him on the back?

 A to cause pain

 B to start fighting

 C to end the quarrel

 D to show his strength

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12 What did the quarrel turn into?

 A a fight about which sibling was right

 B a fight in which the siblings never talked

 C a fight to decide which sibling was better

 D a fight which went on and on for many days