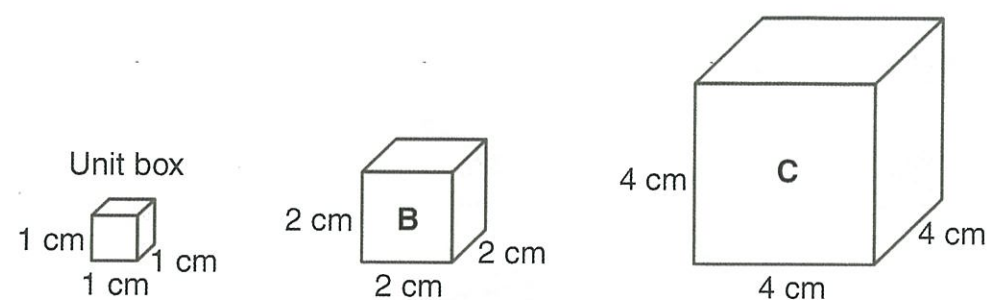


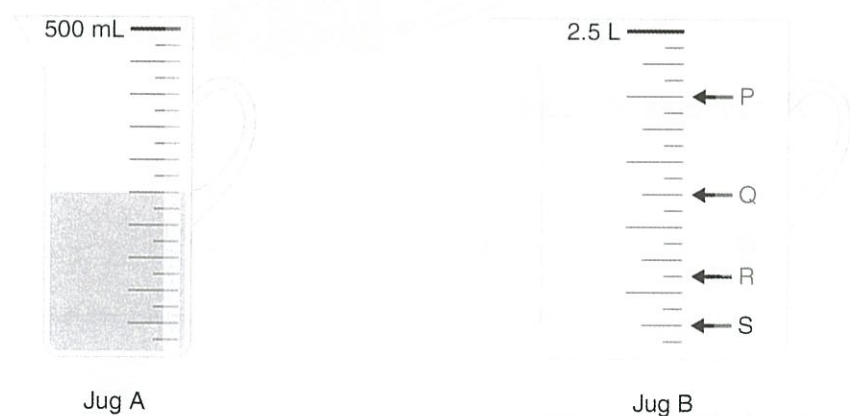
21 Box B can hold eight unit boxes.



How many unit boxes can box C hold?

- A 4 B 16 C 32 D 64

22 All of the water from Jug A is poured into Jug B.



Which arrow shows the level of the water in Jug B?

- A arrow P B arrow Q C arrow R D arrow S

23 + + weigh 24 grams

+ + weigh 21 grams

How many grams does + weigh?

- A 8 B 12 C 15 D 23

24 In an electrical circuit, voltage (V), current (I) and resistance (R) are related by the formula $V = I \times R$.

The value of I is 1.2 when $R = 10$

For the same voltage (V), what is the value of the resistance (R) when $I = 2$?

- A 6 B 8.3 C 12 D 16.6

25 This is a school calendar. The school is closed on Saturdays and Sundays.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2	3	4	5	6	7
8	9	10	11 Visit to museum	12	13	14
15	16	17	18	19	20	21
22	23	24	25 Annual Sports Day	26	27	28
29	30	31				

Today the students visit the museum.

How many more days will the school be open before the Annual Sports Day?

- A 7 B 9 C 11 D 13

26 A cylinder has some water in it.

A different cylinder has the same volume of milk in it.

Which of these statements **must be true** for the liquids in the two cylinders?

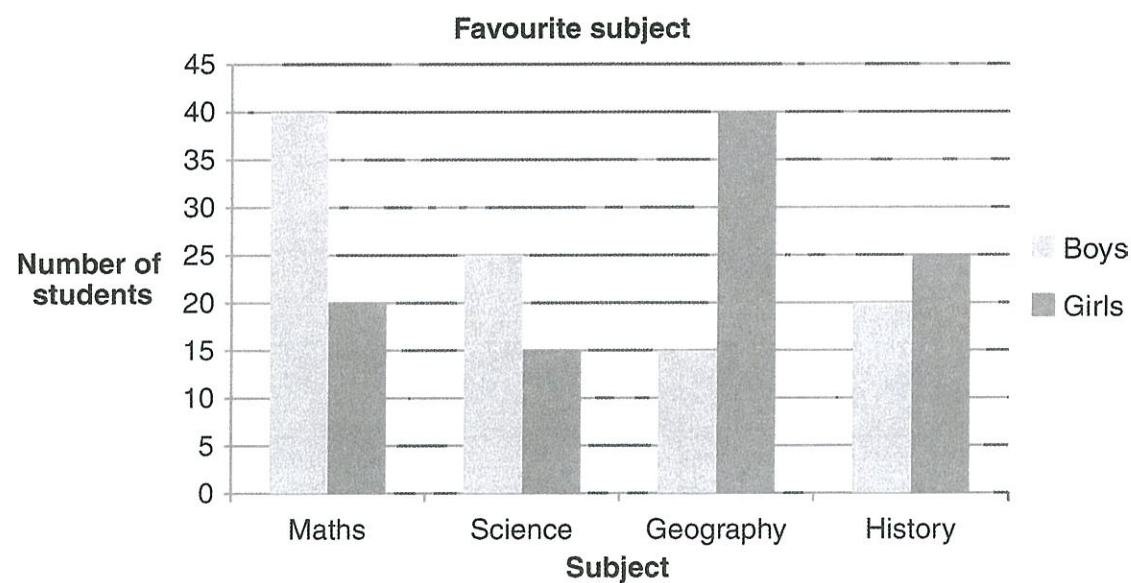
- A The liquids in both cylinders have the same weight.
 B The liquids in both cylinders have the same height.
 C The liquids in both cylinders have the same surface area.
 D The liquids in both cylinders occupy the same amount of space.

27 $2^{2x} = 256$

What is the value of x ?

- A 4
- B 8
- C 64
- D 128

28 A group of students were surveyed about their favourite subject.



Which subject has nearly the same number of boys and girls?

- Maths **A**
- Science **B**
- Geography **C**
- History **D**

29 Each person at a picnic chose at least one piece of fruit.

One-third of the people chose an apple.

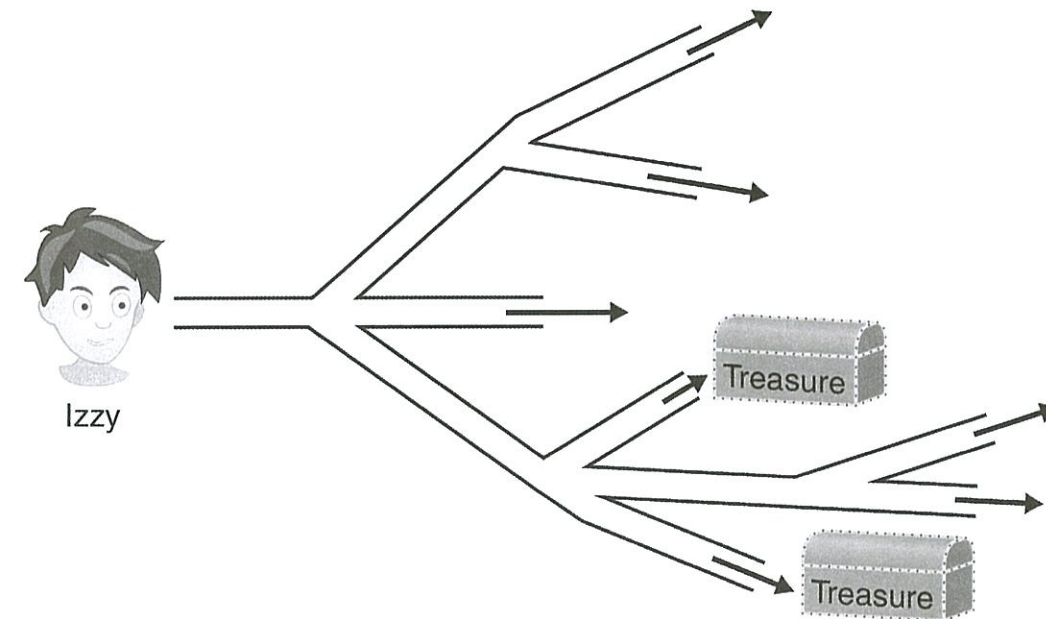
Three-quarters of the people chose an orange.

What fraction of the people chose both fruits?

- $\frac{13}{12}$ **A**
- $\frac{5}{12}$ **B**
- $\frac{1}{3}$ **C**
- $\frac{1}{12}$ **D**

18 Izzy goes hunting for treasure.

When the trail branches in more than one direction, she has an equal chance of choosing any of the branches.



What is the probability that Izzy finds treasure?

- $\frac{1}{2}$ **A**
- $\frac{1}{3}$ **B**
- $\frac{2}{7}$ **C**
- $\frac{2}{9}$ **D**

19 Four students look at all the dishes in a menu.

Amy says one out of the 4 dishes is made from potatoes.

Rohan says 25% of the dishes are made from potatoes.

Sara says one-fourth of the dishes are made from potatoes.

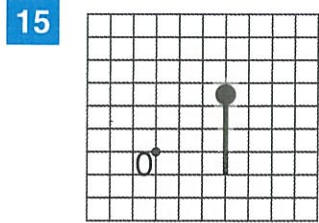
Peter says half of the dishes are made from potatoes.

Which student disagrees with the others?

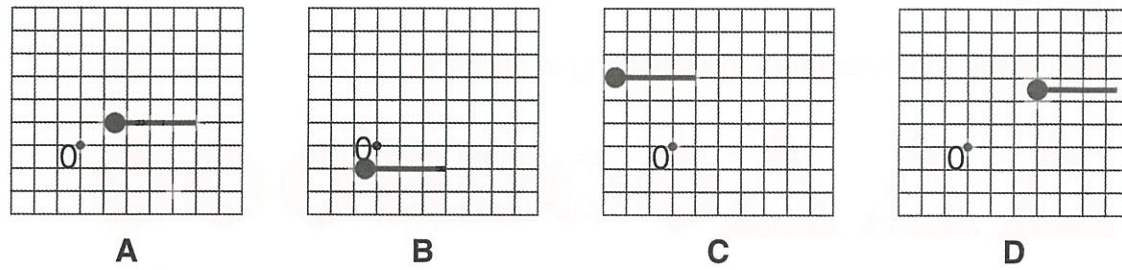
- Amy **A**
- Rohan **B**
- Sara **C**
- Peter **D**

20 How many centimetres is 2350 mm?

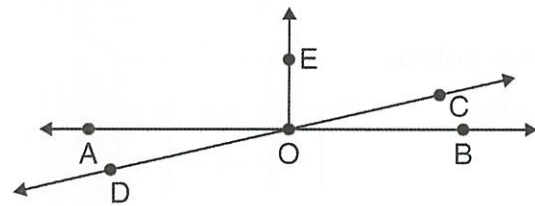
- 2.35 cm **A**
- 23.5 cm **B**
- 235 cm **C**
- 23500 cm **D**



A shape is rotated anticlockwise through 90° about point O.
Which picture shows the new position of the shape on the grid?



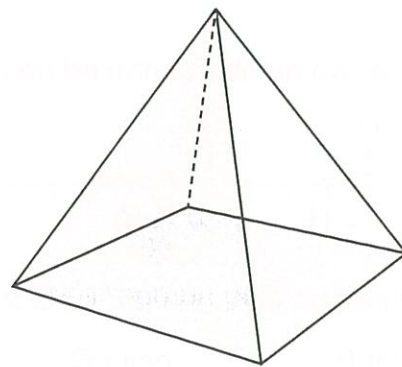
16 AB and CD are two intersecting lines.
 $\angle AOE = 90^\circ$, $\angle EOC = 72^\circ$



What is the size of $\angle AOD$?

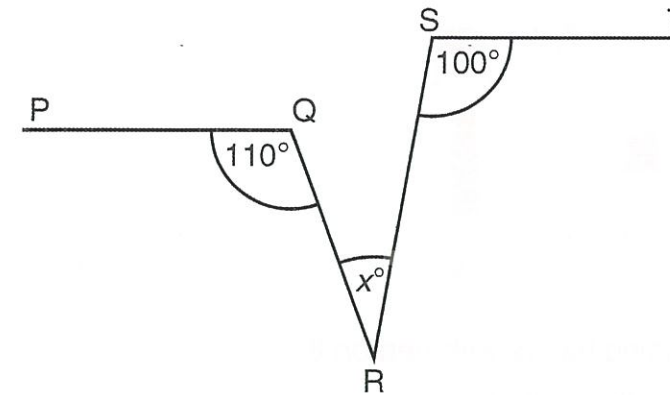
- 18° 28° 72° 90°
A B C D

17 How many ways are there of cutting this square-based pyramid into two identical parts?



- 1 2 4 5
A B C D

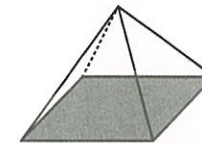
30 In this diagram, PQ is parallel to ST.



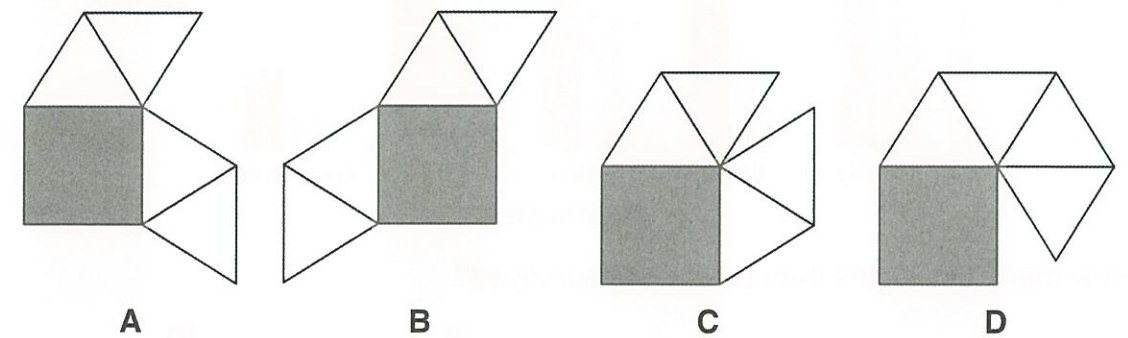
What is the value of x ?

- 10 30 75 105
A B C D

31 This is a square-based pyramid.



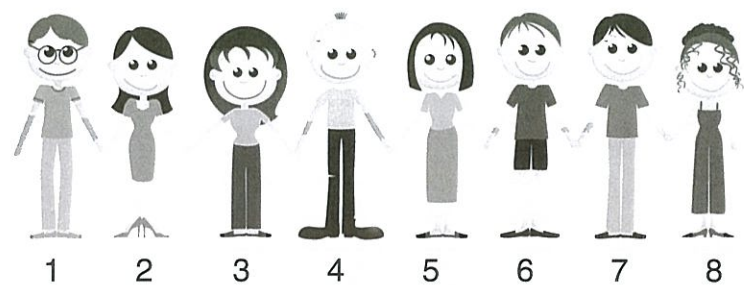
Which of these is a net of this pyramid?



32 A movie starts at 12:50 pm.
It runs for 2 hours 23 minutes.
At what time does the movie end?

- 10:27 am 2:13 pm 2:53 pm 3:13 pm
A B C D

33 Eight people stand in a line holding hands.

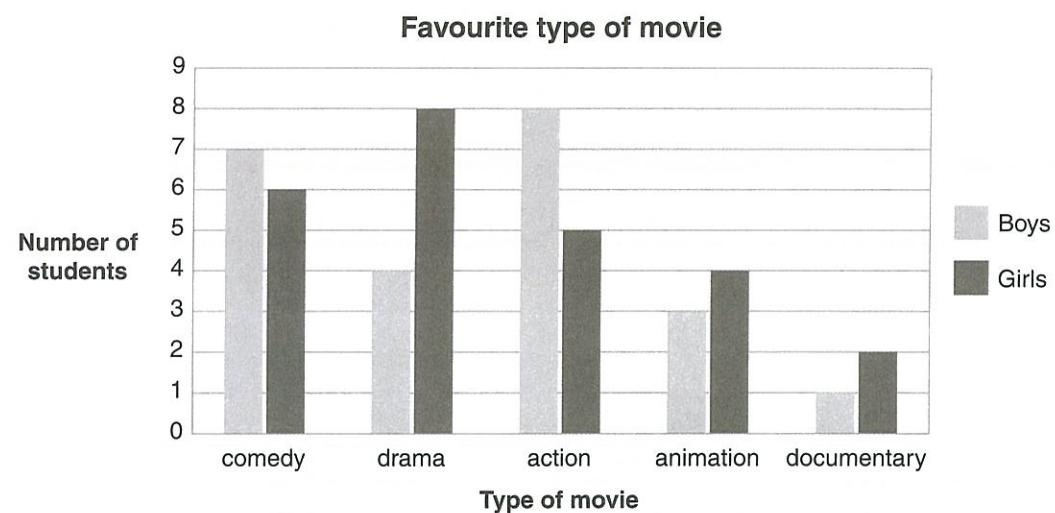


They form a circle with person 1 holding hands with person 8.

Who is standing opposite person 2 in the circle?

- person 3
A
- person 4
B
- person 5
C
- person 6
D

34 A group of students were surveyed about their favourite type of movie.



How many more girls than boys were surveyed?

- 1
A
- 2
B
- 6
C
- 10
D

35 Three friends share the cost of a taxi ride equally.

The taxi ride costs \$30.60 altogether.

How much does each friend pay?

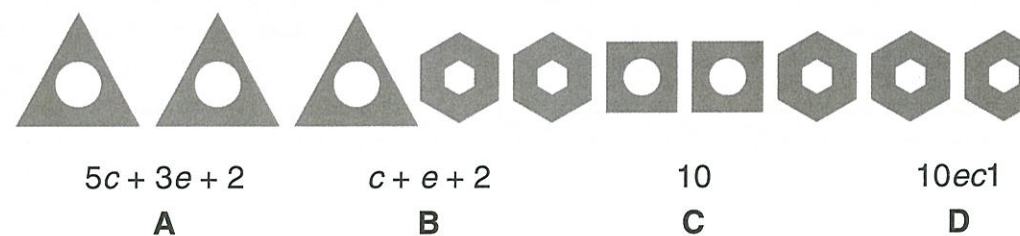
- \$10.20
A
- \$10.60
B
- \$12.00
C
- \$15.30
D

12 weighs 1 gram

weighs c grams

weighs e grams

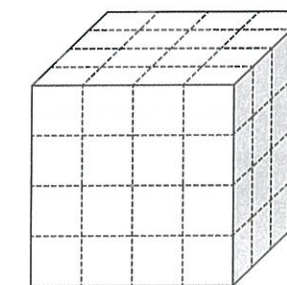
What is the total weight of the following in grams?



13 All faces of this cube are painted.

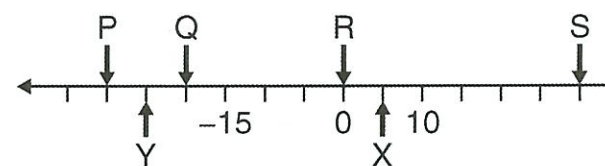
It is cut along the dashed lines to get 64 smaller cubes.

How many of the smaller cubes **do not** have any painted faces?



- 4
A
- 8
B
- 24
C
- 32
D

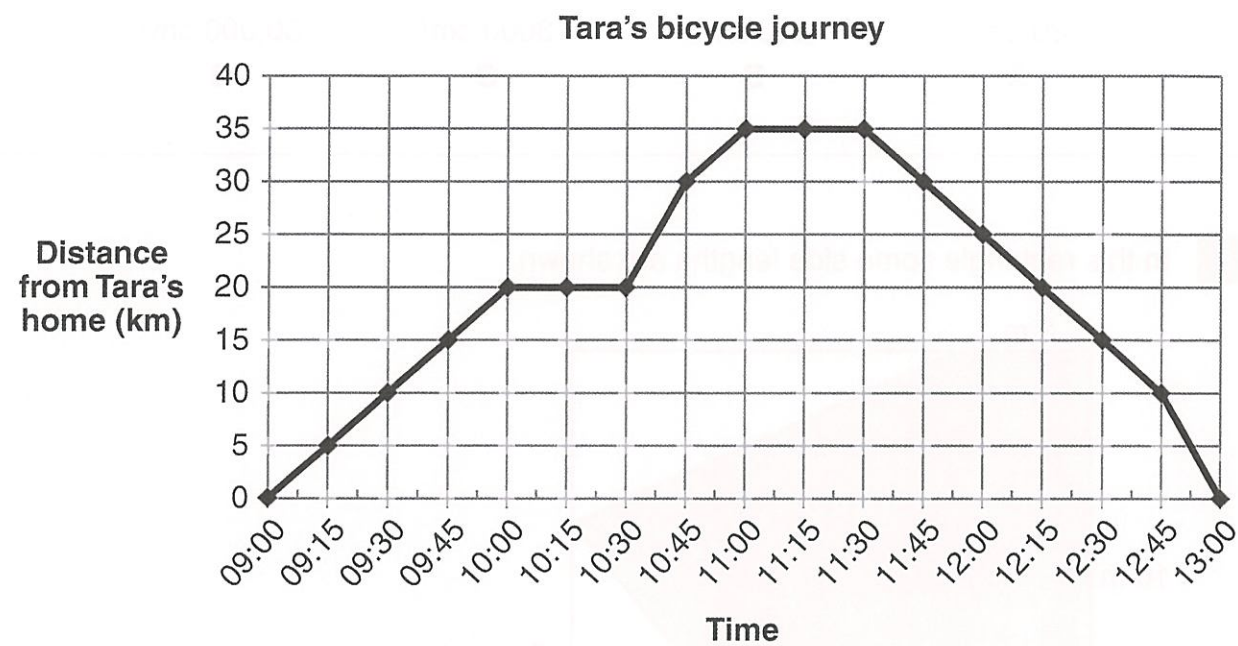
14 X and Y are two numbers marked on this number line.



At which point on the number line is the value of "X - Y"?

- point P
A
- point Q
B
- point R
C
- point S
D

- 9 Tara rides a bicycle to the shop. She takes the same route back home. This graph shows Tara's journey.



When did Tara start to return home?

- A 10:00 B 11:00 C 11:30 D 13:00

- 10 This is a pattern of shapes made with matchsticks



Shape 1 Shape 2 Shape 3 Shape 4

How many matchsticks will shape 10 have?

- A 22 B 27 C 34 D 44

- 11 On average, a person's hair grows by 0.83 cm each month. How much does an average person's hair grow in 4 months?

- A 3.22 cm B 3.32 cm C 32.2 cm D 33.2 cm

- 36 The weather forecast says that there is a 65% chance of rain tomorrow. What does this mean?

- A It is likely that it will rain tomorrow.
 B It is certain that it will rain tomorrow.
 C It will rain continuously for most of the day tomorrow.
 D There is a very small chance that it will rain tomorrow.

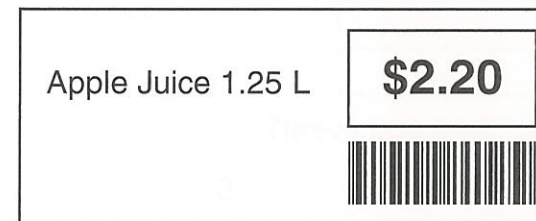
- 37 The actual distance from London to Paris is 350 km.

The scale on a map is 1 cm : 25 km.

What is the distance between London and Paris on the map?

- A 9 cm B 12 cm C 14 cm D 35 cm

- 38

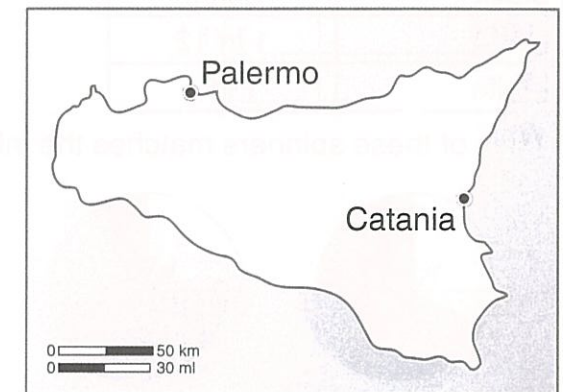


What is the price per litre for this apple juice?

- A \$1.76 B \$1.95 C \$2.46 D \$2.75

- 39 The map shows the island of Sicily.

Choose the best estimate for the direct distance from Palermo to Catania.



- A 50 kilometres B 90 kilometres C 150 kilometres D 190 kilometres

- 40 Sian is downloading a 2 MB file on his computer.
1.4 MB has been downloaded.
What percentage of the file has been downloaded?

1.4% 7% 14% 70%
A B C D

- 41 This table shows information about some girls at an athletics competition.

Name	Age	Number of events entered
Maddy	12	4
Chris	11	2
Samira	11	1
Jenny	13	1
Ava	10	3
Mira	12	2
Jo	13	5

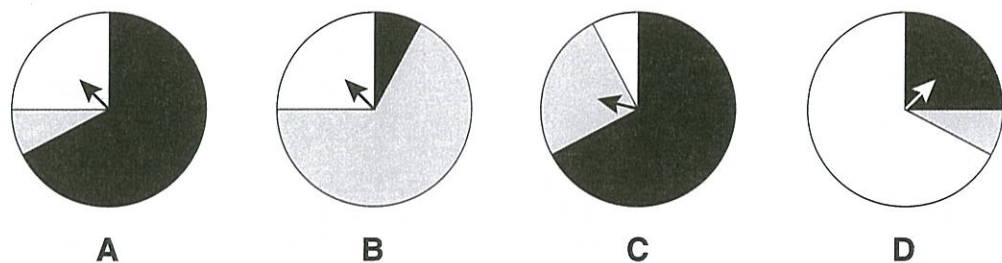
How many girls aged 12 or under entered more than one event?

2 3 4 5
A B C D

- 42 This table shows the chance of each outcome for a spinner.

Outcome	Chance
Black	2 in 3
Grey	1 in 12
White	1 in 4

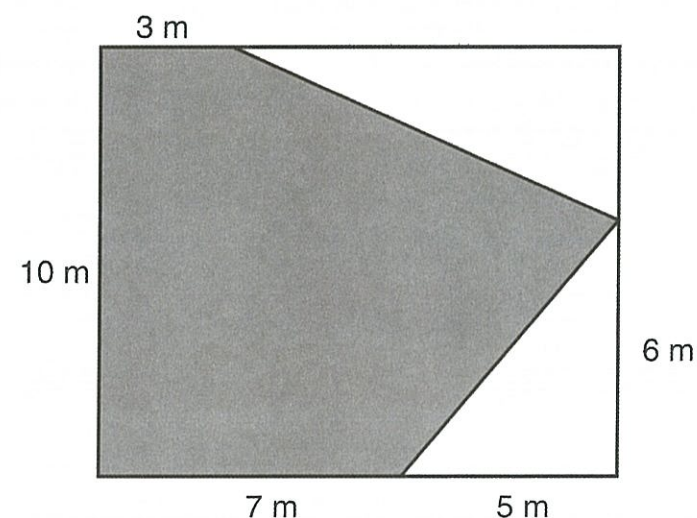
Which of these spinners matches the information in the table?



- 5 The area of a chopping board is 0.3 m^2 .
What is this area in square centimetres?

30 cm^2 300 cm^2 3000 cm^2 $30,000 \text{ cm}^2$
A B C D

- 6 In this rectangle some side lengths are shown.



What is the area of the shaded region in square metres?

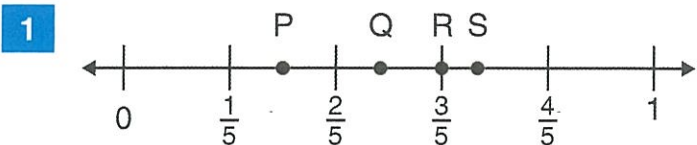
36 75 87 90
A B C D

- 7 In a game, a player gains 2 points, loses 3 points, gains 4 points, loses 1 point.
Which sequence represents the points awarded to the player?

+2, +3, +4, +1 +2, -3, +4, -1 -3, -1, +2, +4 -1, +2, -3, +4
A B C D

- 8 A school basketball team has a 60% chance of winning this year's championship.
What is another way of expressing the team's probability of winning?

1 in 6 2 in 5 3 in 2 3 in 5
A B C D



Which point shows $\frac{2}{3}$ on this number line?

- point P point Q point R point S
A **B** **C** **D**

2 At a sports club, each student must choose one indoor sport and one outdoor sport from the list. How many possible combinations of sports are there?

Indoor	Outdoor
Badminton	Cricket
Basketball	Football
Table tennis	Hockey
	Rugby

- 12 9 7 2
A **B** **C** **D**

3 Four groups of students collected items for flood victims.

Group 1			
Blankets	Utensils	First Aid boxes	Food packets
4	15	3	0

Group 2			
Blankets	Utensils	First Aid boxes	Food packets
10	4	0	7

Group 3			
Blankets	Utensils	First Aid boxes	Food packets
12	14	6	0

Group 4			
Blankets	Utensils	First Aid boxes	Food packets
8	6	2	12

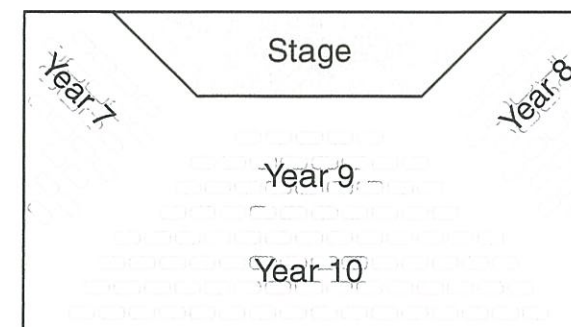
Which group collected the most items?

- Group 1 Group 2 Group 3 Group 4
A **B** **C** **D**

4 Which of these numbers is the largest?

- 3.2 3.154 3.0007 3.00125
A **B** **C** **D**

43 This seating plan shows where students from different year levels sit in the school hall. All students face the stage. Year 7 students face North.



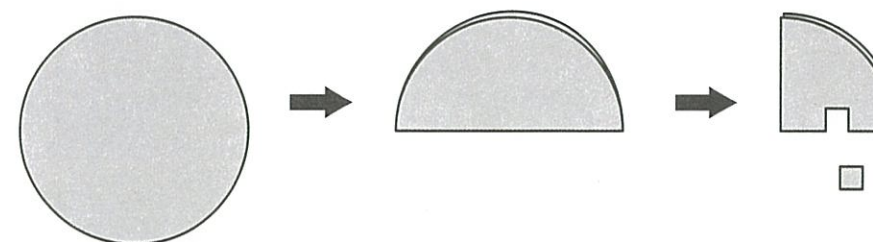
What direction do Year 8 students face?

- East West North-east North-west
A **B** **C** **D**

44 Which of these numbers is a prime number?

- 21 23 25 27
A **B** **C** **D**

45 A circular piece of paper is folded in half. It is folded in half again, and a small square is then cut from the middle of the bottom edge.



The circular piece of paper is unfolded. What shape(s) are missing from the circle?

- A** two rectangles
B one square
C two squares
D four squares



Mathematics



STUDENT NAME _____

NAME OF SCHOOL _____

TEST INSTRUCTIONS

FILL IN YOUR DETAILS

Turn to your ANSWER SHEET and fill in your name, school, grade, section, today's date, your date of birth and gender.

ANSWERING QUESTIONS

Go to the MATHEMATICS ANSWER SHEET.
This test has **45 QUESTIONS**. Each question has four possible options. Choose the **BEST** answer from the four options, **A, B, C** or **D**.
FILL in **ONE** circle on your answer sheet with a pencil.
If you make a mistake, erase the pencil mark and fill in a different circle.
You must colour the entire circle as shown below:

Correct response 	Incorrect responses
	<small>Line Very light pencil Pen Colored pencil</small>

Marks are NOT deducted for incorrect answers.

ALL ANSWERS SHOULD BE MARKED ON YOUR ANSWER SHEET ONLY.

EQUIPMENT ALLOWED IN THIS TEST

You may use a 2B or B pencil for this test. You may NOT use a calculator for this test.

TIME ALLOWED FOR TEST

The time allowed to complete this test is **60 minutes**.