

Get Selected!

Mathematics

Selective Level Paper 1

Instructions

- Do not begin this test or turn over the page in this booklet until you are told to do so.
 - This is a multiple-choice test.
 - Mark your answers clearly with a single line in the appropriate box on the answer sheet.
 - If you make a mistake, rub out the line on the answer sheet completely and clearly mark your new answer.
 - If you cannot complete a question, choose the best answer you can.
 - You may not use a calculator during this test.
 - Work as quickly and as carefully as you can.
 - You have 60 minutes to complete this test.
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Question 1

What is 5.65 litres expressed in millilitres?

Question 2

What is the value of 8 in 48,972?

Question 3

Which of the following words has horizontal symmetry?

DANCERS DAWNING DECIMAL DECIDED DEVOURS

Question 4

Dipan collected information about class 5T's favourite family activities:

	Eating at a Restaurant	Playing Board Games	Watching Movies
Girls	9	1	
Boys	8	3	7

If 32 children took part in the survey, how many girls preferred watching movies?

Question 5

When Lottie planted her sunflower, it was 4cm tall. If it grew at a rate of 0.25cm each day, how tall was Lottie's sunflower at the end of four full weeks?

Question 6

If all columns and rows on this number grid add up to 42 when they are filled in, which number should be in the square containing the question mark?

	?	13
	14	
7		19

Question 7

A train to Sunderland is running 17 minutes late. If it arrives at 19:03, what time was it scheduled to arrive?

Question 8

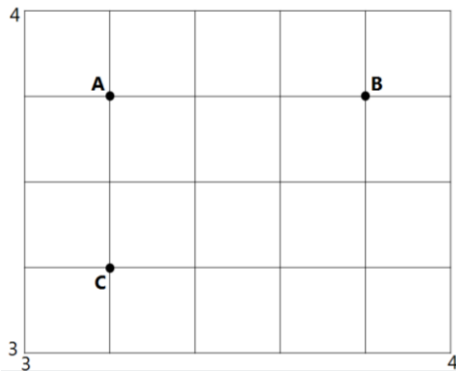
$2(4.8 \times 3.6) =$

Question 9

If one decade is equal to 10 years, calculate how many decades there are in five centuries.

Question 10

In the following diagram, the points A, B and C make up part of a rectangle.



At which coordinates should a fourth point be plotted to complete the rectangle?

Question 11

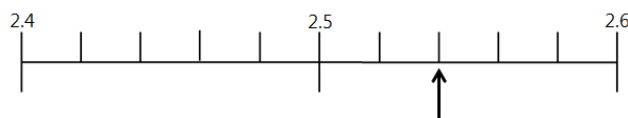
A computer game, which normally costs £15, has been reduced in price by 20%. If, when buying the reduced price game, Khalid pays with a £20 note, how much change will he receive?

Question 12

If $16x - 14 = 50$, what is the value of x ?

Question 13

Look at the number line.



What number is the arrow pointing to?

Question 14

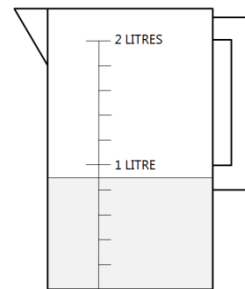
Kevin is painting his daughter's nursery. In order to achieve the right shade, he needs to mix 3 parts cream to 2 parts lilac. If he has to use 18 pots of cream paint, how many pots of lilac paint does he need to use?

Question 15

What is the highest common factor of 48 and 60?

Question 16

Rory is filling his 2l jug with lemon squash for his party.
How more millilitres squash does he need to add to the jug in order to fill it to the 2l mark?



Question 17

Write the number 41.2971 to 2 decimal places.

Question 18

What is the square root of 64?

Question 19

Joshua records how much time he spends watching television each night.

Monday	Tuesday	Wednesday	Thursday	Friday
55m	1h 20m	1hr 10m	45m	2hrs 40m

What is mean time that Joshua spends watching television in minutes?

Question 20

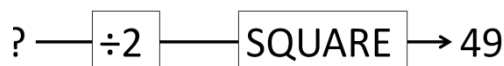
What is the remainder when 42561 is divided by 5?

Question 21

The temperature in Durham is 11°C colder than it is in Enfield. If it is 8°C in Enfield, what is the temperature in Durham?

Question 22

Pranav is experimenting with a number machine.



The number machine first divides the number by two and then squares the answer. If Pranav gets the number 49 out of the machine, what number did he put in?

Question 23

Farley Village Primary School has 8 classes. The head teacher decides to buy each child a pencil. If the mean number of children in a class is 31 and the pencils only come in boxes of 10, what is the minimum number of boxes that she should buy to ensure that each child gets a pencil?

Question 24

Which of the following values is the largest?

A $\frac{4}{5}$

B 0.899

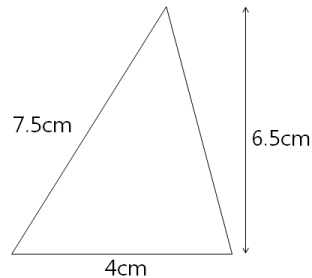
C $\frac{9}{10}$

D $\frac{16}{25}$

E 0.91

Question 25

What is the area of this triangle?



Question 26

Complete the following sequence.

22, 17, 12, 7, 2, __, __

Question 27

What are the correct co-ordinates of the points 1, 2 and 3?

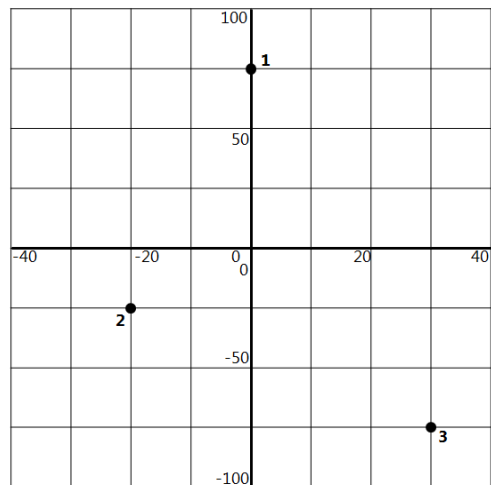
A 1: (0, 75), 2: (-25, -20), 3: (-75, 30)

B 1: (0, 75), 2: (-25, 20), 3: (30, -75)

C 1: (0, 75), 2: (-20, -25), 3: (30, 75)

D 1: (0, 75), 2: (-20, -25), 3: (30, -75)

E 1: (-10, 75), 2: (-20, -25), 3: (30, -75)



Question 28

Margot and Dani hire a rowing boat. Every time they row, their boat moves 1.5 metres. In order to row once completely around the lake, they need to go 300 metres. If they want to row twice around the lake, how many times do they need to row?

Question 29

1/3 off all fares today!!

The Old Victorian Railway is offering 1/3 off all fares for the day. If Simone buys a train ticket which would normally cost £81, what is the price that she pays for the ticket today?

Question 30

Class 4P Bird Survey	
Blackbird	22
Robin	9
Sparrow	
Crow	14
Starling	7

Class 4P are conducting a bird survey. If the mean number of birds seen is 13, how many sparrows were seen?

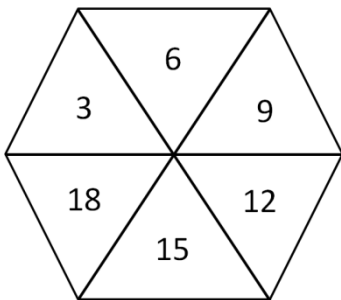
Question 31

What number is exactly halfway between 34 and 72?

Question 32

If Jack is three times the age of his sister and in three years Jack will be 15, how old is his sister now?

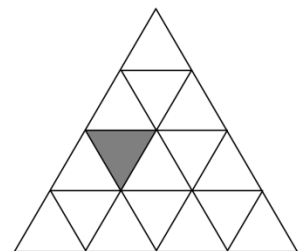
Question 33



A 3x table spinner is equally likely to land on the numbers 3, 6, 9, 12, 15, and 18. What is the probability, expressed as a fraction in its simplest form, that the spinner will land on a number greater than or equal to 15?

Question 34

If the shaded area of this triangle has an area of 50mm^2 , what is the total area of the triangle?

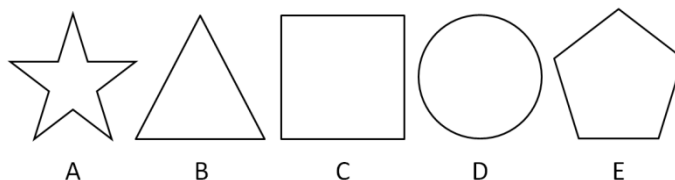


Question 35

Johan has a flask containing 0.70 litres of coffee. If his cup holds 150ml of coffee, how many full cups of coffee can Johan pour from his flask?

Question 36

Which of the following has a rotational symmetry of order of 3?



Question 37

Which of the following has the greatest value?

- A $\frac{2}{5}$ of 125 B 0.4×100 C 30% of 150 D $\frac{1}{2}$ of 84 E 20% of 200

Question 38

$$\begin{array}{r}
 \bigcirc \triangle \bigcirc \quad 4 \\
 + \triangle \bigcirc \quad 2 \quad 8 \\
 \hline
 8 \quad 8 \quad 8 \quad 2
 \end{array}$$

In the sum on the left, the circles stand for one number and the triangles stand for another.

- A $\bigcirc = 3, \triangle = 5$
 B $\bigcirc = 4, \triangle = 6$
 C $\bigcirc = 6, \triangle = 4$
 D $\bigcirc = 5, \triangle = 3$
 E $\bigcirc = 2, \triangle = 5$

What are the values of the circles and the triangles?

Question 39

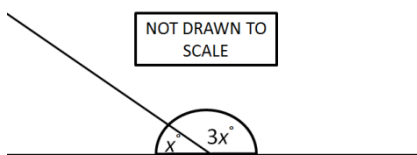
Shannon has been training for the 400 metre running race. On day one, she completed the race in 1 minute and 40 seconds. By day 5, her speed had increased by 25%. How many seconds did it take her to run 400 metres on day 5?

Question 40

Multiply 6.87 by 7.6 and round your answer to 2 decimal places

Question 41

Look at the diagram:



What is the value of x ?

Question 42

Daniel and Arjun are playing table tennis. Every minute they hit the ball 10 times. If this speed is maintained, how many times would they hit the ball over a two hour period?

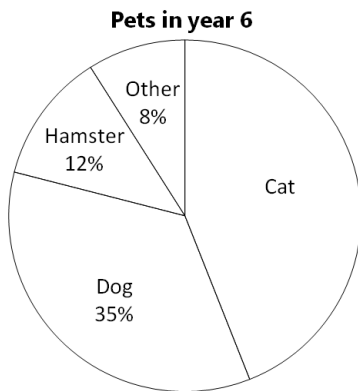
Question 43

Carlton United FC played 32 games over a season. They drew 5 of these games and they won twice as many games as they lost. How many games did they win?

Question 44

On a school residential trip, sleeping bags are packed into lockers during the day. If each locker can hold 13 sleeping bags and there are 178 sleeping bags, how many lockers do the school need to hire?

Question 45



The pie chart shows the different types of pets owned by the children of year 6.

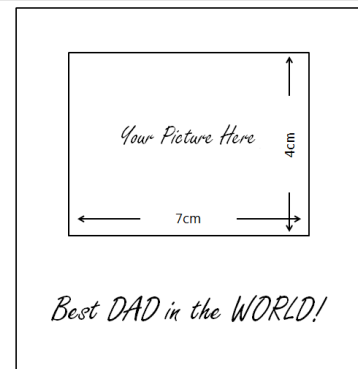
If 14 children in the year group own a dog, how many children own a cat?

Question 46

$$10.5(13.3 + 17.5) =$$

Question 47

Darcia decides to buy her Dad a photo frame. If the frame is 12cm wide and 8cm tall and the photo is 7cm wide and 4cm tall, what is the surface area of the frame?



Question 48

$$4x + 7 = 25 - 5x$$

What is the value of x ?

Question 49

Which of the following words has rotational symmetry?

SWIMS HEELS SMALL HALLS SHELL

Question 50

A map of Scotland is drawn to a scale of 1 : 750,000. What distance in kilometres is represented by 6cm on the map?