

Get Selected!

Mathematics

Selective Level Paper 2

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 number should go in the box?

$$4820\text{g} = \square \text{ kg}$$

Question 2

How would 'twenty five minutes to nine in the evening' be written in 24 hour time?

Question 3

If Ciaran buys some trading cards for £1.49 and some sweets for 49p, how much change will he receive from a £5 note?

Question 4

Which of the following words has a vertical line of symmetry?

kid lid hid bid did

Question 5

What is one million divided by ten thousand?

Question 6

$$\square \square \square \cdot \square \square \square$$

Using all of the empty squares above and each of the following digits once, what is the largest number that can be made?

5	8	4	9	6	1
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Question 7

Mrs Simmonds shows Daisy's mum her recent spelling scores from her mark book.

Week	1	2	3	4	5	6	7
Score	12	9	8	14	7	17	17

What is Daisy's mean test score?

Question 8

$$4x + 7 = 24 - 5$$

What is the value of x?

Question 9

William looks at the answer to a sum on his calculator.

37.7729

His teacher asks him to round the number to two decimal places. What is the result?

Question 10

44	Dartford						
81	51	Guildford					
64	22	29	Croydon				
43	25	50	34	Tonbridge			
28	26	57	42	14	Maidstone		
14	43	75	59	36	21	Ashford	

A theatre group's studios are based in Tonbridge. They have three shows to perform over the course of three days. Each night they return to their studios. On Monday they are performing in Canterbury; on Tuesday they will be in Ashford and on Wednesday they will be in Guildford. Using the mileage chart, calculate the total distance they will travel over the three days.

Question 11

Bonedry Clothing Store has 374 sweatshirts distributed across 22 rails. What is the average number of sweatshirts per rail?

Question 12

If $x = 43^\circ$, what is the value of y ?



Question 13

Nadeem buys 2 cinema tickets online and saves 35% off the normal price of £9.00 each. What amount does Nadeem now pay for the tickets?

Question 14

Which decimal is closest in value to 6?

A 5.097

B 6.1

C 5.9

D 6.093

E 5.93

Question 15

The time in Calais is one hour ahead of the time in Dover. If a ferry leaves Dover at 8:25am, local time and takes one hour and forty minutes to reach Calais, what time will it be in Calais when the ferry arrives?

Question 16

The numbers in this grid form a pattern. What are the values of a and b ?

a	18	27
18	27	36
36	b	54

Question 17

If the 28th September fell on a Monday, on what day of the week will the 11th October fall?

Question 18

Which of the following options contains a square, a prime and a cube number?

- A 1, 4, 6
- B 7, 13, 49
- C 15, 11, 36
- D 16, 21, 27
- E 25, 29, 64

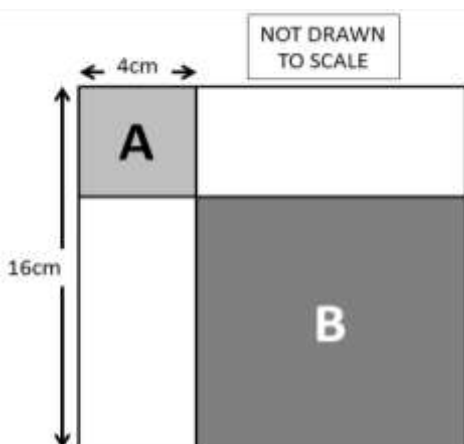
Question 19

Lucas draws a number machine:



What number did Lucas start with?

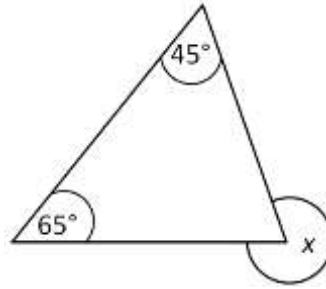
Question 20



Small square A is placed on the corner of larger square B . Using the information in the diagram; calculate the area of square B .

Question 21

What is the value of angle x in the diagram?



Question 22

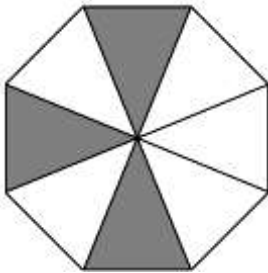
Alfie calculates that in 8 years' time, his age will be exactly half the age of his father. If his father is currently 38 years old, how old is Alfie now?

Question 23

Complete the following sequence:

14, 19, 16, 21, 18, __, __

Question 24



A fair spinner is split into 8 equal sections. Some of the sections are coloured grey, while the rest are coloured white. If the spinner is spun 40 times, how many times should it be expected to land on a grey section?

Question 25

The children at Fulchester County Primary School have been given the chance to audition for the lead role in the school play. If 27 children audition and this represents $\frac{3}{7}$ of the school, how many children are there in total at the school?

Question 26

What is the angle between the minute hand and the hour hand on an analogue clock at exactly 8:00?

Question 27

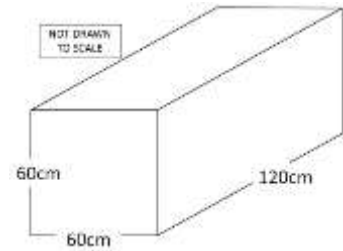
Rishi draws a plan of the park using a scale of 1cm : 9m. if the length of the park is drawn as 13.5cm, what is the actual length of the park?

Question 28

$$(4.2+3.4) \times (9.2-5.9) =$$

Question 29

Mr Jadeya cuts this block of wood into 5 equal sections.
What is the volume of one section?



Question 30

	Names	Times
A	Aaron and Adesh	1 minute 28 seconds
B	Bella and Bonny	1 minute 37 seconds
C	Clyde and Cameron	1 minute 15 seconds
D	Devsiri and David	1 minute 27 seconds
E	Evie and Elaha	1 minute 49 seconds

Mr Cordon records the 3-legged race results at the school sports day. Which pair came fourth in the race?

Question 31

In an art lesson, Greishma cuts a piece of felt in half. If the new length of the felt measures 52cm, what was the original length of the felt in metres?

Question 32

How many faces does a triangular-based pyramid have?

Question 33

Pineville Junior School collect supermarket vouchers. In 2009 they collected 350 vouchers and each year after that they tripled the amount of vouchers that they collected. How many vouchers did they collect in 2011?

Question 34

Over the course of 4 weeks, Mrs Harvey's times tables group wrote their scores on the board in a table. What was the range of scores over the 4 weeks?

Cian	14	9	17	16
Tamara	12	13	24	17
Richa	7	18	6	21
Myles	15	23	21	19

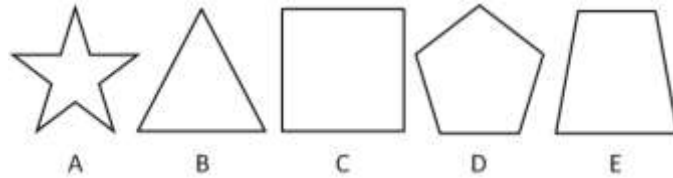
Question 35

	7	16
X		14
	11	

In this number square, each row and each column add up to 35. What number should go in the square marked with and x?

Question 36

Which shape does not have rotational symmetry?



Question 37

Natalya's family are going to Florida for a holiday. Her grandparents give her £60 to spend during the holiday. If £1=\$1.6, how many dollars has Natalie been given to spend in Florida?

Question 38

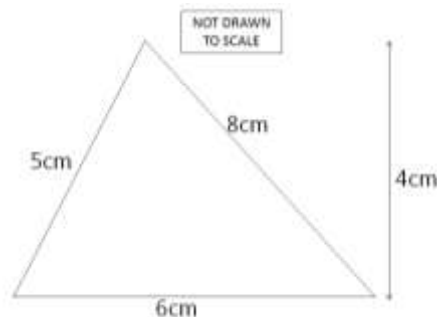
$$22 \times ? = 594$$

Question 39

Express 35% as a fraction in its simplest form.

Question 40

What is the area of this triangle?



Question 41

A librarian is stacking booklets. If each booklet is 3.5mm thick, what is the height of a stack of 25 booklets in centimetres?

Question 42

What is the approximate weight of an apple?

A 5g

B 50g

C 150g

D 250g

E 360g

Question 43

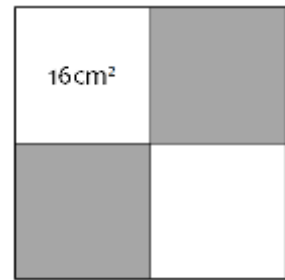
Martin visited his aunt 7 times last year. If the journey one way is 84km and the return journey is the same distance, what is the total distance Martin travelled visiting his aunt?

Question 44

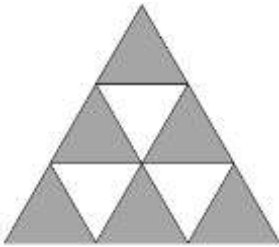
Last month, 96,000 fans visited London's new football stadium. If the ratio of males to females was 3:1, how many female fans visited the stadium?

Question 45

Lois has 4 squares which she glues together to make one larger square. If the area of each of the smaller square tiles is 16cm^2 , what is the perimeter of the larger square?



Question 46



If the area of each of the smaller triangles is 650cm^2 , what is the total area of the shaded triangles?

Question 47

Isabella's after school club have collected data about each other (eg Isabella is a girl who has a pet cat and a brother)

Category/Name	Isabella	Shreya	Roshnie	Isa	Megan	Samir	Robert
Is a Girl	✓	✓	✓		✓		
Is a Boy				✓		✓	✓
Has a pet dog		✓	✓				✓
Has a pet cat	✓	✓					
Has a brother			✓			✓	
Has a sister				✓	✓		
Plays an instrument	✓	✓		✓	✓	✓	✓
Enjoys Sport	✓			✓			✓

How many children have a pet dog and play an instrument but don't have a sibling?

Question 48

$$80 < P < 90$$

If P is a prime number, what is the smallest number that P could be?

Question 49

There are 180 people on a train. At the first station, $\frac{1}{4}$ get off; at the second station $\frac{2}{5}$ of the remaining passengers get off and at the third station 20 people get off and 27 get on. How many people are on the train now?

Question 50

If $14t - 24 = 2t + 12$, what is the value of t ?