11 + Entrance Examination
Sample Paper 1
Mathematics
Total Marks: 96
Time allowed:1 hour

Information for parents:

This sample paper has been created for children who are embarking on the 11+ exam. The questions within the paper follow Level 4-5 of the National Curriculum and cover the majority of the KS2 curriculum.

There is a big variation in the level of difficulty amongst different schools' 11+ papers and this paper is designed to reflect the standard level of entry at 11+.

Full name …….

Owl Tutors

1. Answer the questions below. You can show your working on the space provided.

a. 14 + 34= ____

b. ___+ 25 = 78

c. 23 x 3 =___

d. 34 + ____ = 12 + 45 4 marks

2. Complete the number sequences.

a. 8, 12, 16, 20,_____

b. 9, 12, _____, 18, 21

c. 12, 18 ,_____,30, 36, _____ 4 marks

3a. Write down the number which is 20 more than 291 1 mark

b. Write down the number which is 10 less than 1105 1 mark

4. Work out the following:

a. ____ x 54 = 540

b. 5400 ÷_____ = 54

c. 5400 ÷ ____ = 540

d. 5.4 x _____ = 540 4 marks

5. The temperature in Bob's house is 4 degrees. As the weather turns cold, this drops by 10 degrees. What is the temperature in Bob's house now?

2 marks

6. Write the correct number to match the description. Each number can only be used once.

1, 7, 13, 16, 25

prime number

square number

cube number

multiple of 8

the median of all 5 numbers 5 marks

7. Order these numbers from smallest to biggest

0.1 0.01 1.1 1.01 1.11 2 marks

8a Sandy has 20 sweets. She gives 1/5 of them to her friend Alex.
How many does Alex get?

2 marks

b. With her remaining sweets, Sandy gives 25% to her brother. How many does her brother get?

2 marks

c. Sandy has now given away some of her sweets to Alex and her brother. She rearranges her remaining sweets into bags. Each bag can take 5 sweets, how many bags will Sandy need to store all her sweets?

2 marks

9. Complete this table so that the value in each row is equal.

fraction	decimal	percentage
$\frac{1}{2}$		
	0.75	
		30%
	0.04	
$\frac{1}{5}$		

6 marks

10 Here are the ingredients needed to make a cake for 5 people.

200g butter
400g flour
350g sugar
1 teaspoon of vanilla extract

a. How much flour would you would need to make a cake for 10 people?

_____ 2 marks

b. How much of each ingredient would you need to make a cake for 1 person?

_____g butter _____g flour
_____g sugar _____ tsp vanilla extract

4 marks

c How much butter would you need to make a cake for 2?

_____ 2 marks

d. James wants to make a cake but only has 160g of butter. How many people will his cake feed?

_____ 2 marks

e. Mrs. White wants to make a cake for 3, she only has 80g of flour. How much more flour does she need to be able to make her cake?

_____ 2 marks

11. Sam buys

1 comic book costing £1.15

1 pencil case costing 81p

2 water bottles

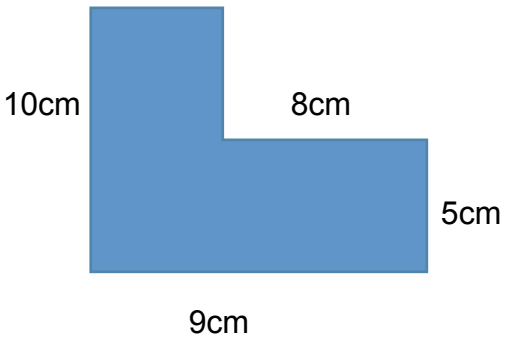
Sam pays with a £5 and gets £1.78 change.

What is the cost of one water bottle? Show your workings here:

3 marks

12. Work out the area and perimeter of this shape.

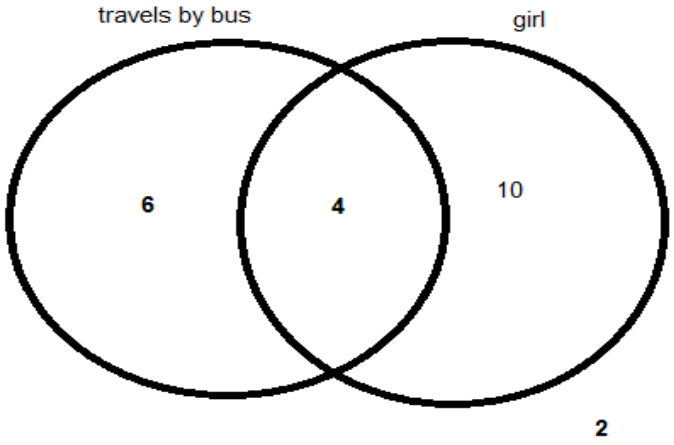
(Not drawn to scale)



Area _____ Perimeter _____

4 marks

13. Class 6J conducts a survey on how children in the class come to school and present their results using a Venn diagram



a How many girls travel by bus to school? _____

b How many children come to school by bus? _____

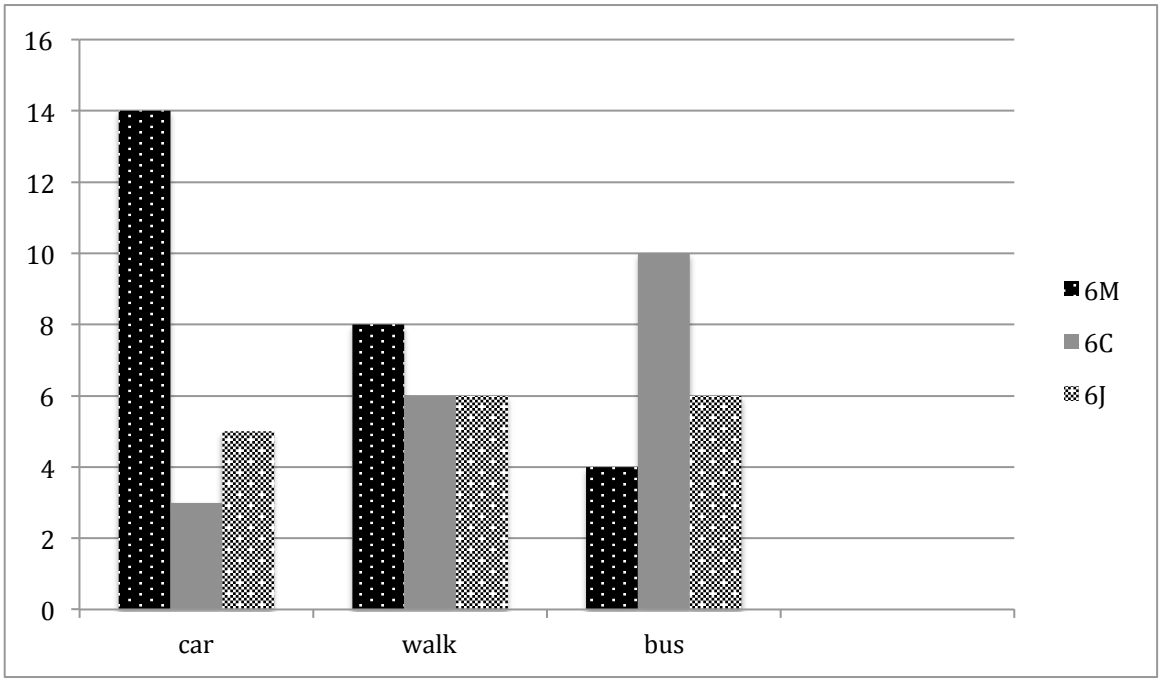
c. How many students are in Class 6J? _____

d How many boys are there in Class 6J? _____

e Two new students join the class. Dave travels to school by car and Alice walks to school. Correct the numbers in the Venn diagram to reflect these new results.

6 marks

14. Year 6 decide to collect data about how children in the year group travel to school. Their results are shown below:



a How many more children in 6M walk than 6C?

b How many children in Year 6 come to school by car?

c What is the most common method of travel in class 6M?

d What is the common method of travel in Year 6?

e How many children are in Year 6?

5 marks

15. May has 5 coins in her bag. She has one 50p coin, two 20p coins, one 10p coins and a 5p coin.

a) What is the total value of all the coins in her bag?

1 mark

b) What percentage of the coins are 20p coins?

1 mark

One coin is picked at random. As a fraction, write the probability that the coin May picks will be:

i) a 10p coin _____

ii) is not a 20p coin _____

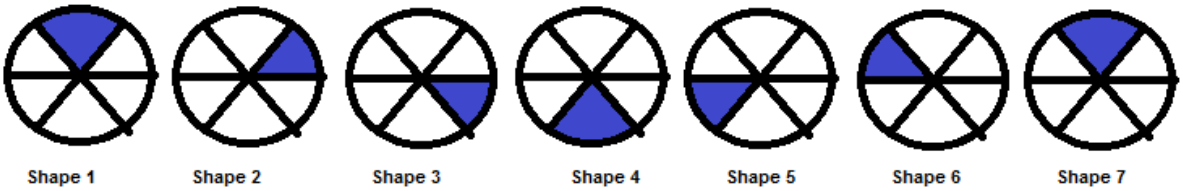
iii) a coin worth less than £1 _____

3 marks

16. Gemma thinks of a number. She adds 3 to her number, and then multiplies the result by 5. The answer is 30. What is Gemma's number? _____

2 marks

17. This is the start of a pattern:



Circle the picture which would be the 10th shape in the pattern

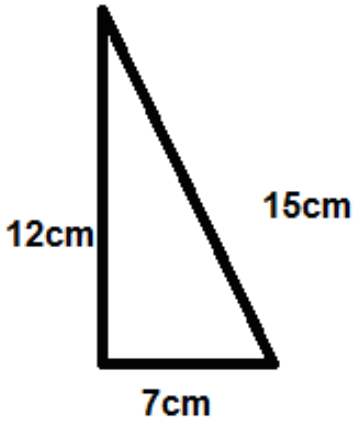
Circle the picture which would be the 15th shape in the pattern

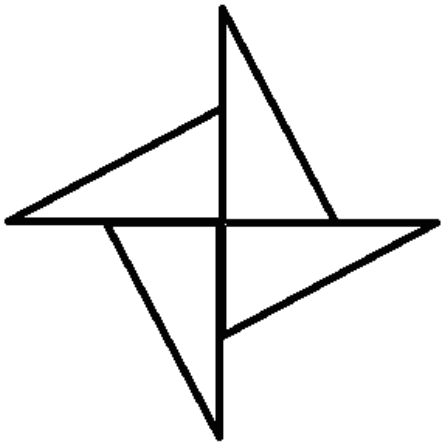
Circle the picture which would be the 27th shape in the pattern.

Circle the picture which would be the 42nd shape in the pattern.

12 marks

18. This is a right angled triangle. Using 4 of these triangles, Sanjit creates this shape below. What is its perimeter and area?





Perimeter _____ 4 marks

Area _____ 4 marks

19. A group of children decide to play a board game but only two boys and two girls can play at the same time.

Alfred will only play with Heather.
Heather won't play if Ben is playing.
Ben won't play if John or Clara plays
John will only play if Zara plays
Zara doesn't mind who she plays with.

Which 2 boys and which 2 girls play the board game?

4 marks