READING BLUE COAT SCHOOL ENTRANCE EXAMINATION MATHEMATICS (SAMPLE PAPER)

11 +

Instructions to candidates

Time allowed: 1 hour.

Write your name and the name of your current school in the boxes below
Answer as many questions as you can.
Do not spend too long on any one question.
Show **all** of your working. You may get marks for it.
Write all your answers in the spaces provided.
You may **not** use a calculator.
The examination consists of 18 printed pages (including this cover sheet)

Name:	
Present School	

1. Calculate 736 + 4588

Answer: .....

2. Calculate 3267 - 745

Answer: .....

3. Calculate 956 x 78

Answer: .....

4. Calculate 5992 ÷ 7

Answer: .....

5. A uniform shop sells 6 times as many white shirts as blue shirts. 63 shirts are sold in total. How many white shirts are sold?

Answer: .....

6. a) Write down the number sixteen thousand and four in figures.

Answer: .....

b) Write down the number twelve and three hundredths as a decimal.

Answer: .....

7. Lucy buys five bottles of lemonade at £1.09 each and 6 chocolate bars at 55p. How much change should she receive from a ten-pound note?

Answer: £.....

8. A length of rope is 3m long. It is cut into four unequal lengths. Three of the pieces are 147cm, 32.5cm and 67cm. How long is the fourth piece?

Answer: .....cm

9. Fill in the missing numbers to make each equation correct.

e.g. 56 + 22 = 44 + ……34..

a) 67 + 78 = 49 + ……

b) 63 – 48 = 43 - …….

c) 70 x 8 = 7 x …….

d) 8400 ÷ 60 = 840 ÷ …….

10. Sara thinks of a number. She subtracts four, then divides by two and then adds eleven. Her answer is 37. What is the number that Sara first thought of?

Answer: .....

11. Raj is 138cm tall and David is 170cm tall. Jacob is half way between Raj's and David's height. Work out Jacob's height.

Answer: .....cm

12. A cyclist cycles 30 kilometres in 2 hours. How many minutes does it take him to cycle 500 metres at the same rate?

Answer: .....mins

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13. For each set of numbers put a **circle** around the **smallest number** and a **square** around the **largest number**.

a) 1.506 1.56 1.006 1.056 1.6

b) $\frac{1}{3}$ $\frac{5}{7}$ $\frac{6}{5}$ $\frac{8}{9}$ $\frac{1}{4}$

c) $\frac{11}{20}$ 0.5 $\frac{2}{5}$ 0.2 $\frac{13}{100}$

d) 27.5cm $\frac{1}{4}$ m 260mm 0.3m 38cm

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14 Add together 2.49kg, 670g and 3kg 80g. Give your answer in grams.

Answer: .....g

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15. I am thinking of a number.

It is less than 100.

It is even.

It is a square number.

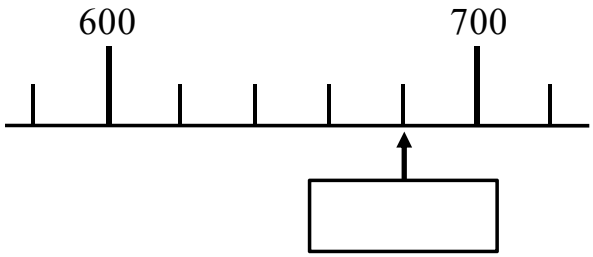
It is a multiple of four and a multiple of three.

What is the number?

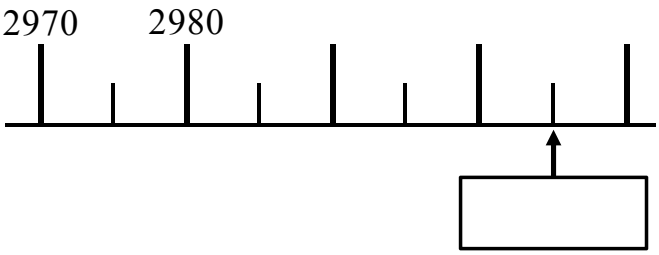
Answer: .....

16. Here are parts of four different number lines.
Write in the number indicated by the arrow.

a)



b)



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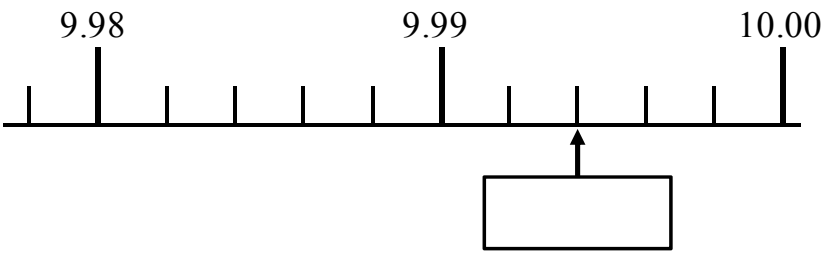

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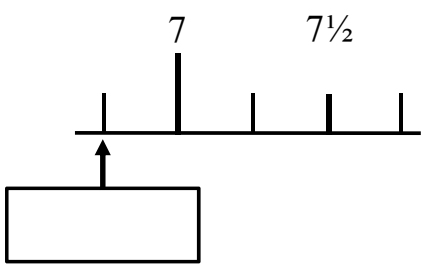
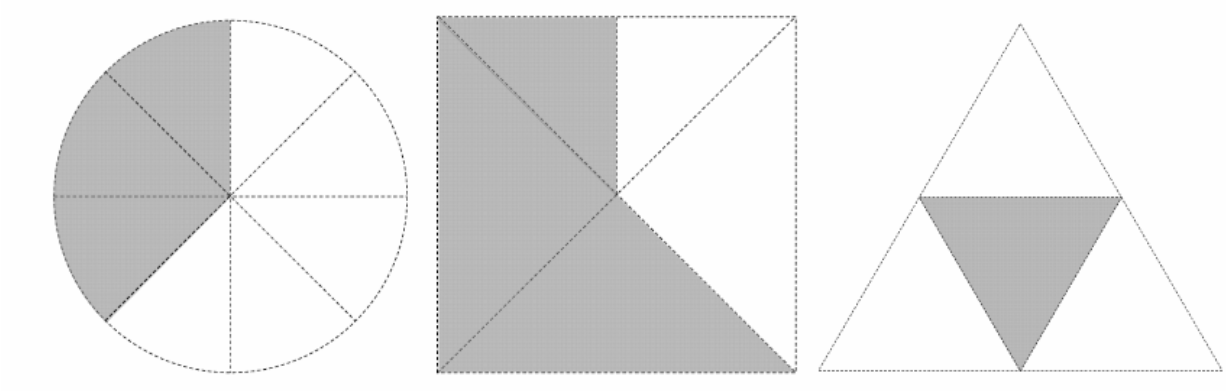


17. Write down two fractions which are equivalent to $\frac{3}{4}$ where one of the numbers is a twelve.

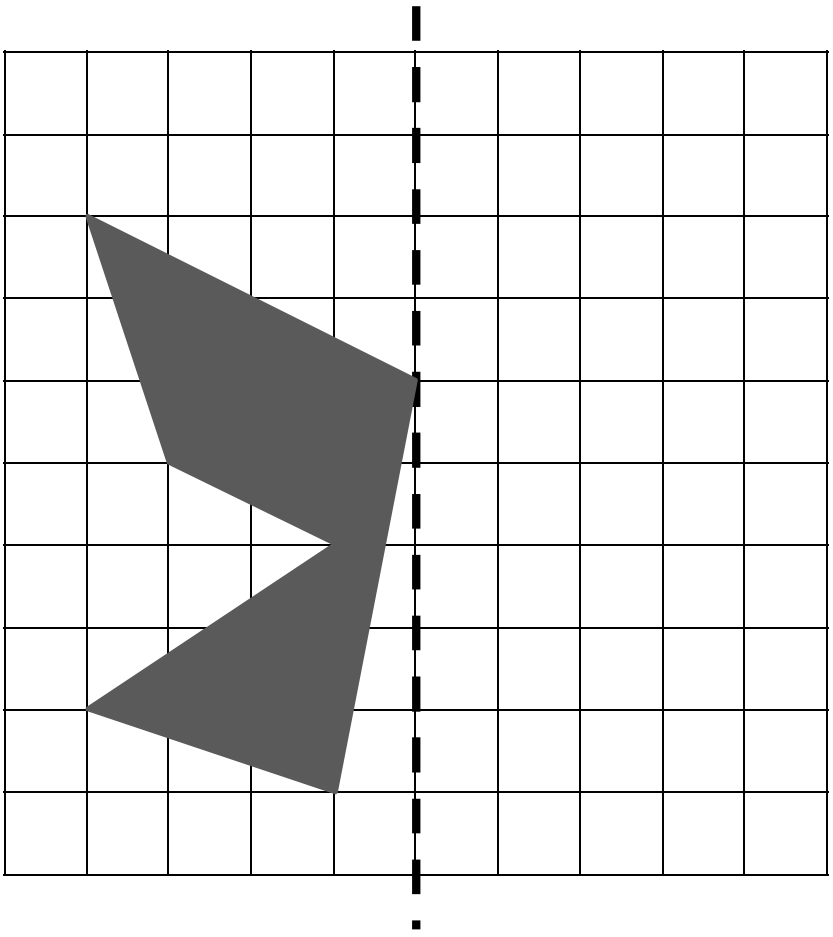
Answer: $\frac{\square}{\square}$ or $\frac{\square}{\square}$

18. For each of the shapes below, express the shaded portion as a fraction;

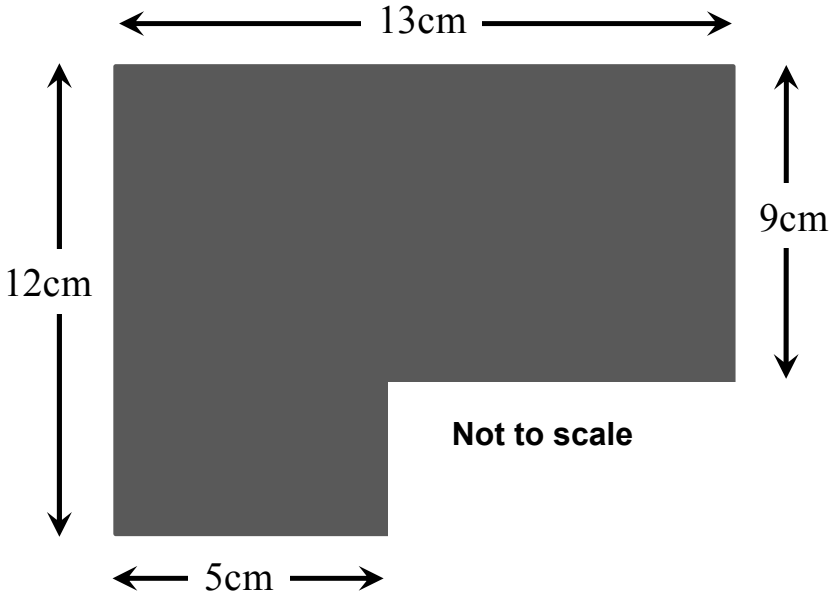


a) Answer..... b) Answer..... c) Answer.....

19. Complete the diagram so that it has reflective symmetry in the dotted line.



20. What is the area of this shape?



Answer: ……cm^2

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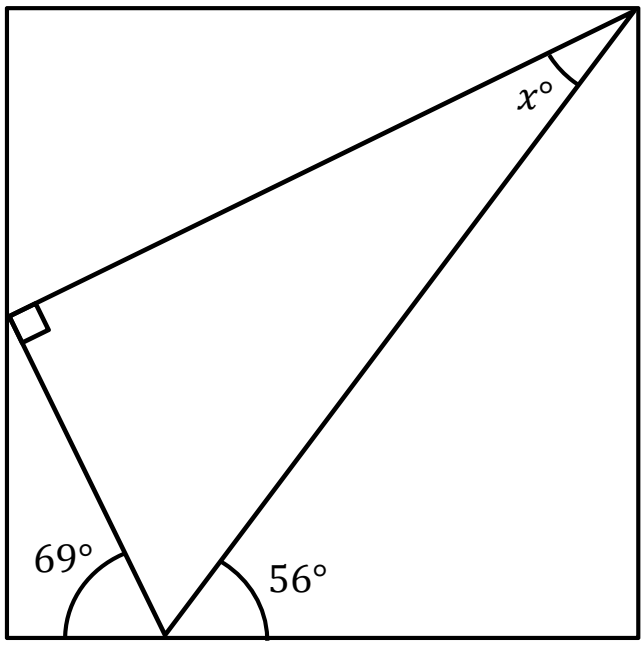
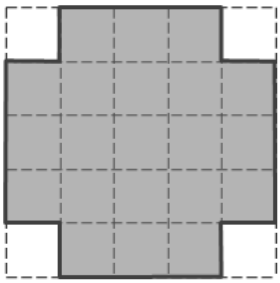
21. Here is a **right angled triangle** inside a **rectangle**. Calculate the value of angle **x**.
Do **not** use a protractor or angle measurer.



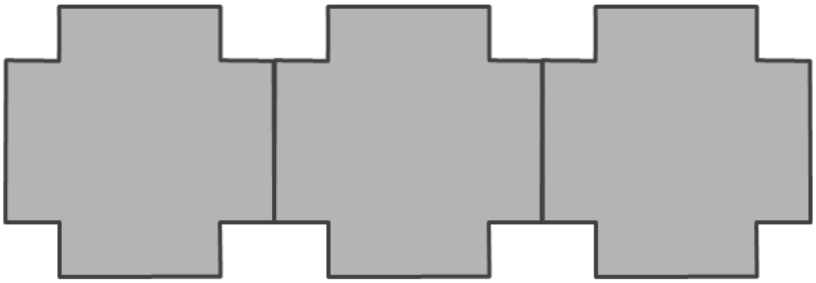
Answer: ……

22. A tile in the shape of a cross is made by drawing a square of length 5cm and then removing four squares of length 1cm from each corner.
What is the perimeter of the cross shape tile?



Answer: ……cm

Robert puts three tiles together to make the shape below. What is the perimeter of his shape?



Answer: ……cm

Ravi put ten tiles together in a similar way. What is the perimeter of his shape?

Answer: ……cm

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23. In an enclosure there are 16 animals – a mixture of geese and rabbits. These animals have 42 feet between them.

a) How many geese are there?

Answer: ……

b) How many rabbits are there?

Answer: ……

24. This calculation is correct: **367 x 438 = 160746**
Use this result to answer these questions:

a) 3.67 x 4.38 Answer: .....

b) 160746 ÷ 438 Answer: .....

c) 1607.46 ÷ 4.38 Answer: .....

d) 1607.46 ÷ 367 Answer: .....

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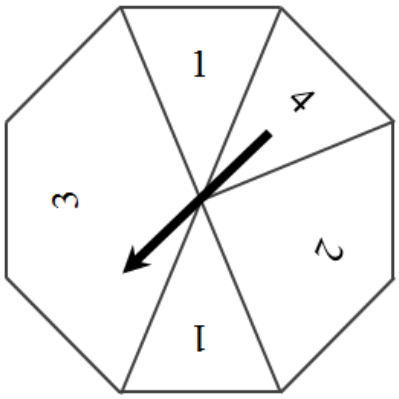
25. a) Here is an octagonal spinner.



For each statement put a tick (✓) if it is true or a cross (✗) if it is false.

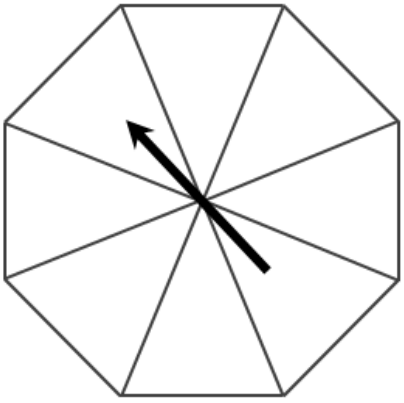
1 is the **most likely** score .....

1 and 2 are **equally likely** scores .....

Odd and even scores are **equally likely** .....

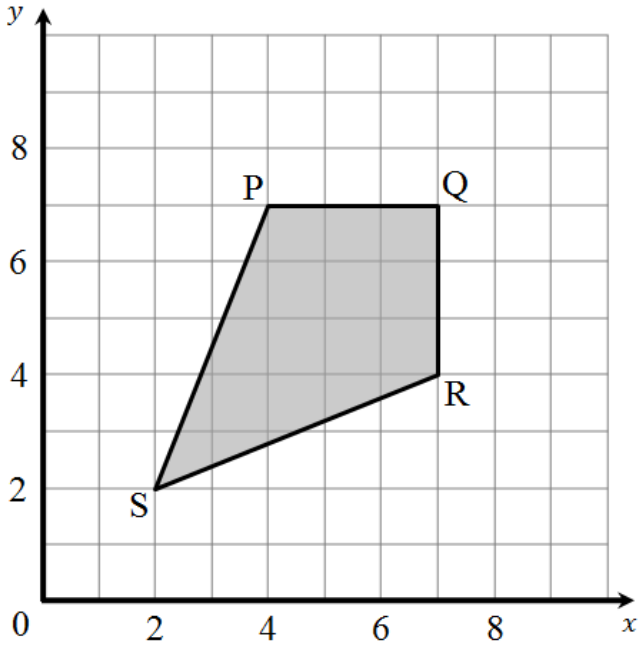
A score of less than 3 is **more likely** than a score of 3 or more .....

b) John is designing a spinner. He wants it to only have the numbers 1, 2, 3 and 4 on.
He wants the probability of getting a 1 to be ½.
He wants the probability of getting a 2 and a 3 to be equally likely.
He wants the probability of getting a 4 to be greater than the probability of getting a 3.
Enter the number(s) 1, 2, 3 or 4 into each of the eight sections of the spinner.

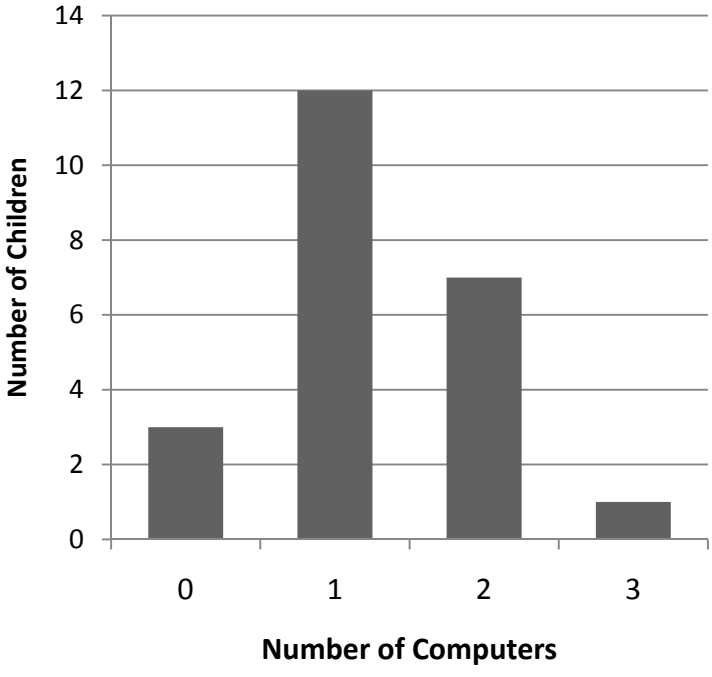


26. a) Write down the co-ordinates of the point **P** ……..

b) Name the quadrilateral **PQRS** ……..



27. The diagram below shows the number of computers that members of a class had in their homes.
For example, 12 children had one computer at home.



a) How many children had no computer at home?

Answer: ……..

b) How many children were there in the class?

Answer: ……..

c) What is the total number of computers owned by the whole class?

Answer: ……..

END OF EXAMINATION