

# 11+ Maths

Name.....

Candidate Number.....

Seat Number.....

## Paper A 2017

**Please put your name in the space provided above.**

**This maths paper contains 40 questions, which you have 40 minutes to complete.**

**The paper is out of 40 marks in total.**

**Write your answers clearly on the paper and make sure any mistakes are erased.**

**You can jot any working out on this test or extra rough paper.**

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Q1. Work out  $2.16 + 5.7$

**Answer** = .....

Q2. What is  $3.1 \times 6$

**Answer** = .....

Q3. Calculate  $15 - 4.1$

**Answer** = .....

Q4. What is 1.5m converted into millimetres?

**Answer** = .....mm

Q5. How many millilitres are there in half a litre?

**Answer** = .....ml

Q6. What is 7020 grams in kilograms?

**Answer** = .....kg

Q7. What is the highest common factor of 45 and 54?

**Answer** = .....

Q8. What is the lowest common multiple of 12 and 18?

**Answer** = .....

Q9. What is half of a half of 36?

**Answer** = .....

Q10. What is 0.7 as a fraction?

**Answer** = .....

Q11. Tom walks 3 kilometres in 30 minutes. How far will he walk if he carries on at the same speed for 2 hours?

**Answer** = .....km

Q12. A bookcase can hold 55 books. How many bookcases should the school order to house 2000 books?

**Answer** = .....

Q13. Mr Jones cuts a stick of length 2.10 metres into 3 pieces of equal length. How long is each piece?

**Answer** = .....cm

Q14. Books cost £3.99 each. How much change will Sanju receive from £20 if she purchases four books?

**Answer** =£.....

Q15. Jeremy's bag weighs 6 kg when it has 8 identical books inside. If the bag itself weighs 2kg, what is the weight of each book in grams?

**Answer** = .....g

Q16. 20% of children in year 6 have joined the football club. If there are 15 year 6 children in the club, how many children are there in year 6?

**Answer** = .....

Q17. It takes 3 hours and 15 minutes for Jayan to drive from London to Birmingham. If he leaves at 11.55 am, what time will he arrive using the 24-hour clock?

**Answer** = .....

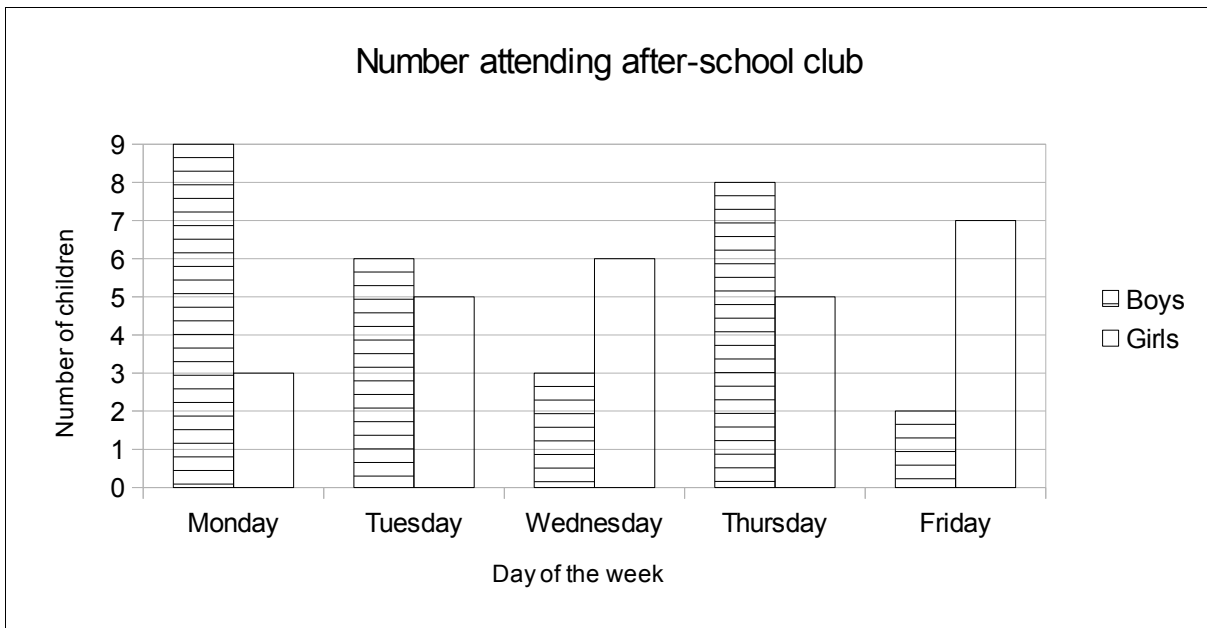
Q18. How many quarters are there in the number 10?

**Answer** = .....

Q19. What is 30% of 420?

**Answer** = .....

Look at the chart below and answer questions 20-22.



Q20. How many more boys attended on Monday than Wednesday?

Answer = .....

Q21. How many children attended on Monday and Wednesday?

Answer = .....

Q22. If it costs £3.00 per child per day to attend the after-school club, how much money was collected during this week?

Answer = £.....

Q23 Work out  $\frac{1}{3} + \frac{2}{5}$

Answer = .....

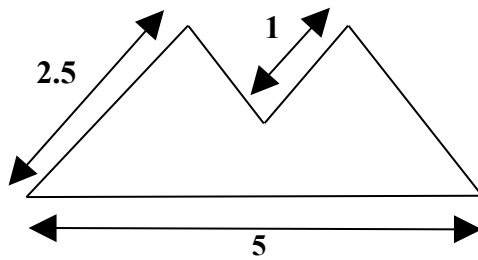
Q24. Calculate  $\frac{7}{8} - \frac{1}{4}$

Answer = .....

**Q25.** Name a quadrilateral that has one line of symmetry and its diagonals cross at right-angles.

**Answer** = .....

**Q26.** Work out the perimeter of the following shape. It has a line of symmetry.



(Lengths given in centimetres but diagram not drawn to scale.)

**Answer** = .....cm

**Q27.** If the perimeter of a square is 36 cm, what is its area?



**Answer** = .....cm<sup>2</sup>

**Q28.** Find the value of my mystery number if 6 times my mystery number plus 4 equals 52.

**Answer** = .....

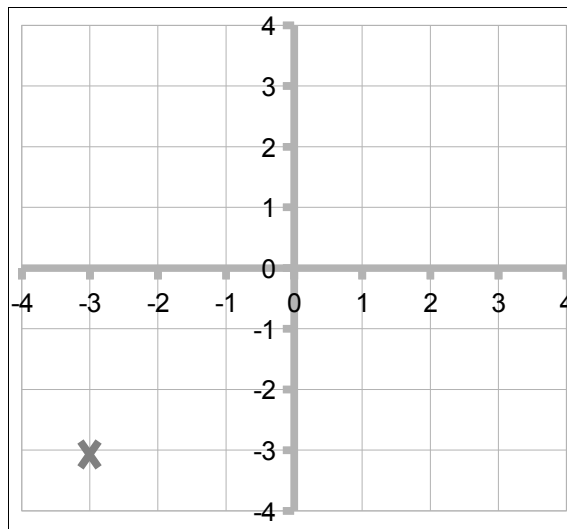
**Q29.** Carl divides 42 marbles between himself and his younger brother in the ratio of 4 to 3. How many marbles does his brother receive?

**Answer** = .....

**Q30.** Ben is three years older than Alice.  
Carda is two years older than Ben.  
The sum of their ages is 20.  
How old is Alice?

**Answer** = .....

**Q31.**



**X** is marked on the grid at the point  $(-3, -3)$ .

"X" is able to move 2 squares to the right and one square up (known as the R-move), or two up and then one to the right (known as the L-move).

What are the coordinates of where the "X" ends up after the following moves:

R, R, L, L ?

**Answer** = .....

**Q32.** "X" needs instructions to move from its present location at  $(-3, -3)$  to  $(1, 2)$ .  
Write down a sequence of moves (using R and L) that enables "X" to arrive at  $(1, 2)$  in as few moves as possible.

**Answer** = .....

A group of students make up the following symbols:

A number followed by a \* means to multiply that number by all the numbers less than it, down to 1.

A ^ after a number means to multiply the number by 2.

So  $10^*$  means  $10 \times 9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$

$5^*$  means  $5 \times 4 \times 3 \times 2 \times 1$

$10^\wedge$  means  $10 \times 2$

$5^\wedge$  means  $5 \times 2$

Using the above symbols, work out the following:

**Q33.**  $20^\wedge$  divided by  $2^\wedge$

**Answer** = .....

**Q34.**  $3^* + 5^*$

**Answer** = .....

**Q35.**  $(2^\wedge)^*$

**Answer** = .....

**Q36.**  $30^*$  divided by  $29^*$

**Answer** = .....

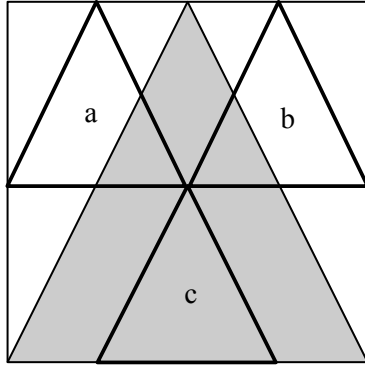
**Q37.** The answer to  $(4^*)^\sim$  is 576

What does the new symbol  $\sim$  stand for?

**Answer** = .....

**Q38.** Calculate  $((2^\sim)^*)^\wedge$

**Answer** = .....



The shape above is made from a square, a large shaded isosceles triangle and three small identical, equilateral triangles, labelled a,b and c.  
 The square is of length 4cm.

**Q39.** What is the area of the one of the smaller triangles?

**Answer** = .....cm<sup>2</sup>

**Q40.** How many of the smaller triangles would fit into the area of the large triangle?

**Answer** = .....

**End of Test.**