

Paper B. 2015

Maths Paper

11+

Name.....

Candidate Number.....

Seat Number.....

Please put your name in the space provided above.

This maths paper contains 30 questions, which you have 40 minutes to complete.

The paper is out of 44 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.

ElevenPlusMock.org.uk

Q1. Convert one million, six hundred and twenty thousand grams into kilograms.

Answer = kg

Q2. What is the difference in minutes between 2.42 p.m. and 5.36 p.m.?

Answer = minutes

Q3. How many £3.50 tickets can I buy with a £20 note?

Answer = tickets

Q4. What's the total number of people if there are 726 children, 123 men and 58 women?

Answer =

Q5. Calculate 30% of 210.

Answer =

Q6. What is $\frac{1}{5}$ of 120?

Answer =

Q7. Round 29.45813 to the nearest hundredth.

Answer =

Q8. Which three numbers below have the same value?

0.2, 2, $\frac{2}{10}$, -2, 22%, $\frac{4}{10}$, 0.4, 40, $\frac{1}{5}$, 50%

Answer =, and

Q9. The following five race times for 200m were recorded:

40 secs. 53 secs. 1 min. & 12 secs. 42 secs. 1 min. & 3 secs.

a) What is the fastest speed in metres per second?

Answer = **m/s**

b) What is the range?

Answer = **seconds**

c) What is the median?

Answer = **seconds**

d) What is the mean?

Answer = **seconds**

Q10. Jessica has invented the '@' sign in maths. @ of two numbers is the product of the sum and the difference between those two numbers. For example, $10@1 = 11 \times 9 = 99$.

a) What is $5@2$?

Answer =

b) What is $6@4$?

Answer =

c) What is the value of F if $4@F = 12$?

Answer =

d) Give a value of C if $7@C = 0$.

Answer =

Q11. What is the angle marked with the letter A in the triangle below?

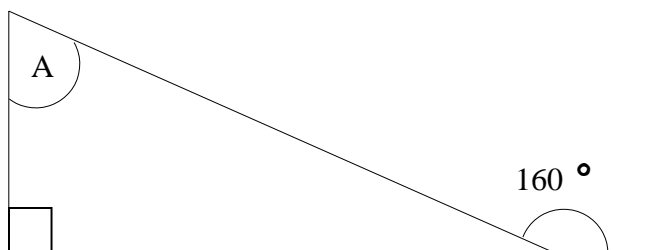


Diagram not drawn to scale.

Answer = °

Q12. Fred has 4 of each of the following coins:-
1p, 2p, 5p, 10p and 20p

a) What is the total amount of money that he has?

Answer = £.....

b) How many different amounts of money can Fred make if he takes two coins at random?

Answer =

c) What is the probability that the first coin taken at random is silver?

Answer =

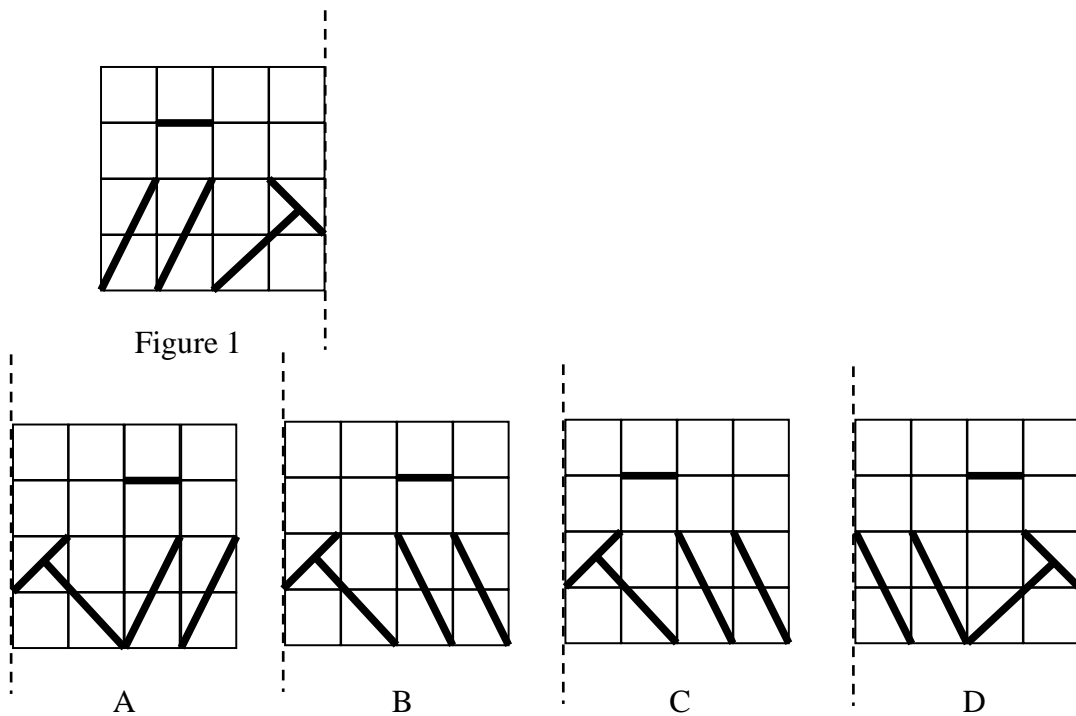
Q13. Fill in the gaps using one of the four mathematical operations:

+ , X , - or ÷ .

a) $23 \square 4 = 9 \square 3$

b) $30 \square 5 = 12 \square 6$

Q14. Which of diagrams A - D correctly reflects figure 1 in the dotted line?



Answer =

Q15. Ravi was born on 3rd December 1997 and he had a cricket bat for his 8th birthday present. He was selected for his school team 6 months later. What month and year was this?

Answer =

Q16. 6 bricklayers take 6 hours to build a wall 6m long and 6m high. How much time does it take 5 bricklayers to build a wall 10m long and 6m high?

Answer = **hours**

Q17. Billy runs 100m twice as fast as his brother. How long does it take his brother if, when their times are added together, the result equals 45 seconds?

Answer = **seconds**

Q18. Sylvie is a waitress and gets paid £8.50 per hour on week days.

a) How much does Sylvie earn if she works on Monday from 09:00 to 13:00?

Answer = £

b) In addition, she receives 20% of all tips taken.

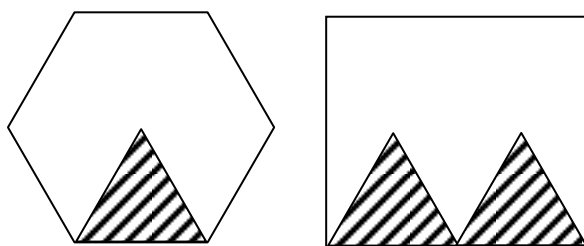
How much did the restaurant receive in tips on Monday before it gave Sylvie her £4 share?

Answer = £

c) At weekends, Sylvie gets paid twice her week day hourly rate (but no tips). How much does she earn from 14:00 to 18:30 on Saturday?

Answer = £

Q19. How many times bigger is the area of eight regular hexagons and four rectangles (one of each is shown below), than one of the shaded equilateral triangles?

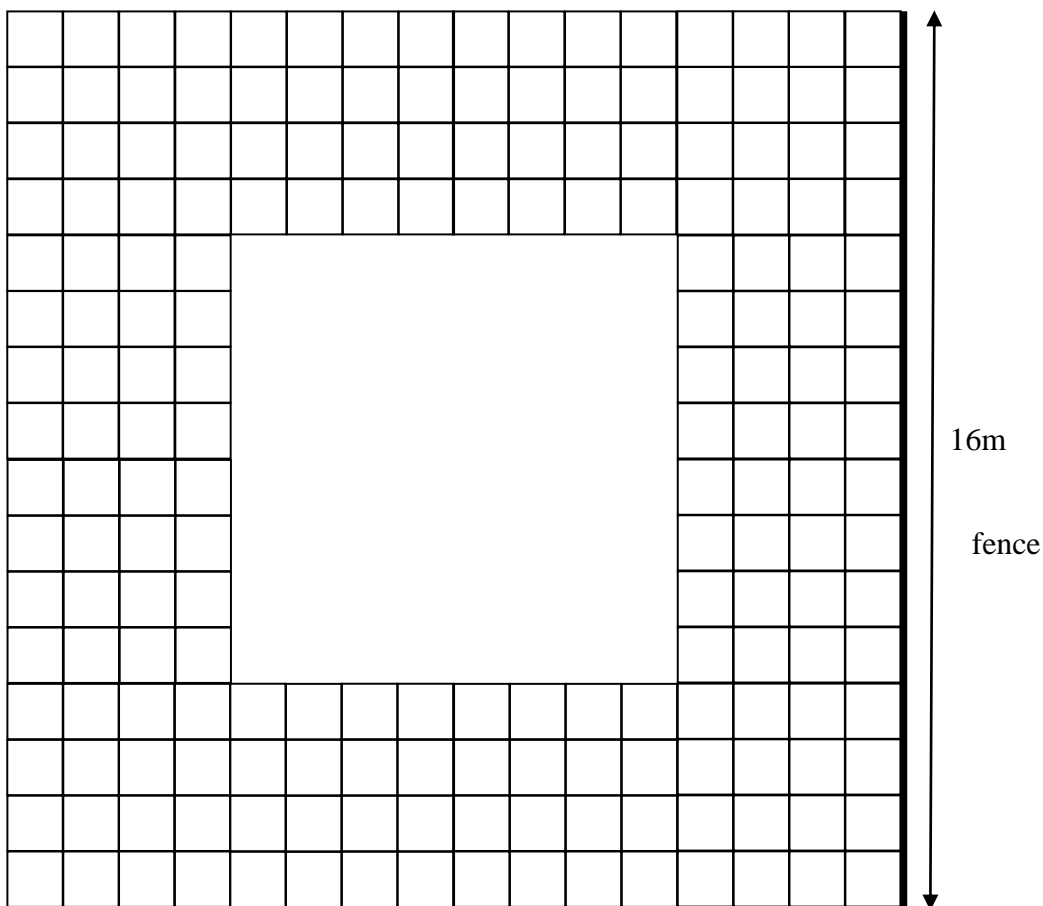


Answer =

Q20. Three coordinates of a rectangle are (2,1), (6,1) and (6,-9). What are the coordinates of the 4th point?

Answer =

Q21. A square outdoor shallow pool which has sides 8m in length is surrounded by lots of 1m^2 tiles as shown below.



a) What is the perimeter around the paddling pool?

Answer = m

b) The length of the fence is 16m. What is the total area covered by the square tiles?

Answer = m^2

c) What volume of water is required if the pool is 0.5m deep?

Answer = m^3

Q22. Think of a number and divide into 10. Multiply the answer by 8. If the final answer is 20, what is the number that you first thought of?

Answer =

Q23. A coach can take 26 passengers. How many coaches are required to take 500 passengers to a concert?

Answer =

Q24. The first term in a sequence is 1. After that, each term is calculated by multiplying the previous term by 4 and then adding 1.

a) What is the 4th term in the sequence?

Answer =

b) Describe the rule for the sequence below.

1, 8, 50, 302, 1814,

Answer =

Q25. Describe how the sequence is formed below.

1, 8, 27, 64, 125,

Answer =

Q26. A map uses a scale of 1:25000. On the map, there are 3cm between the church and the school. How far apart are they in the village?

Answer = metres

Q27. All the 120 children in year 6 each make one model 3D shape in maths. 25% of the models are not finished properly and another 35% of the total get broken before home time. How many models are successfully made so that they can be taken home?

Answer =

On Planet Marlite the inhabitants (Marlitians) have 8 fingers and toes. Therefore they count in eights. For example, there are 8 larps to a marp when monetary transactions are made, and there are eight marps to a warp.

When being transported around planet Marlite, there is a distance called a wite that is eight times further than a mite, which in turn is eight times longer than a lite.

Answer questions 28-30 that follow about the planet Marlite.

Q28. A Marlitian adds up the amount of money he is carrying. He has 4 larps, 3 marps and 2 warps. How many snacks can he buy if they cost 6 larps each?

Answer =

Q29. It costs 2 larps to travel each lite. If the Marlitian wishes to travel half a wite, how much does it cost in warps?

Answer =

Q30. Marlitians cannot write 8 or 9 as we do and have to write 10 when they reach 8. For example, their counting begins:
1, 2, 3, 4, 5, 6, 7, 10, 11, 12 etc...

What is the answer to this sum on planet Marlite?

$$245 + 354$$

Answer =