Maths

11+

1. A butcher sells each slice of ham for £1.99, how much would it cost to buy 25 slices?

A	B	C	D	E
£50.25	£50	£39.80	£51	£49.75

**2. The square on the right is know as a magic grid.
Each column, row and diagonal adds up to 32.
What is the value of B?**

	B	17
	11	
		9

A	B	C	D	E
2	6	3	15	4

3. £399.35 shared equally between seven people gives £ _____ each.

| A	B	C	D	E
£69.05	£57.05	£59.05	£59.50	£69.50

4. Celina buys a pair of boots £400, it is first reduced to half price and then it is reduced by a further 30%, what is the final sale price?

A	B	C	D	E
£60	£140	£80	£480	£260

5. What is the value of the missing angle?

_____ °

51°
42°
97°
?°
65°
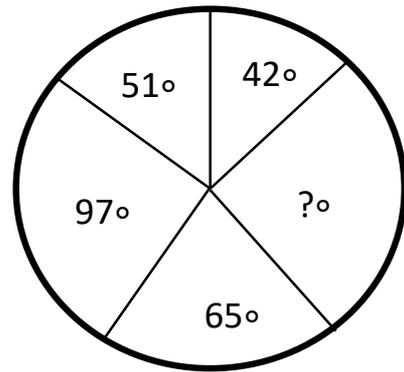
6. A post office sold 8763 stamps in 1000 days. What is the average number of stamps they sold to the nearest whole number each day?

A	B	C	D	E
8.763	8	0.8763	9	1

7. What is the area of the shape to the right?

A	B	C	D	E
108cm	102cm	120cm	144cm	96cm

8 cm

6 cm

12 cm
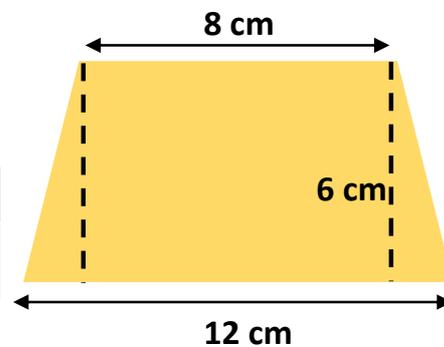
8. How many edges does the triangle-based pyramid have on the right?

A	B	C	D	E
3	4	5	6	7
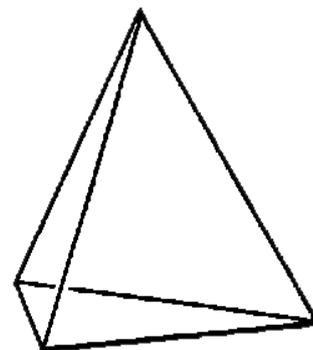
9. If A=6 cm, what is the volume of the cuboid to the right?

_____ cm^3

1.5A

$\frac{1}{3}$ A

A

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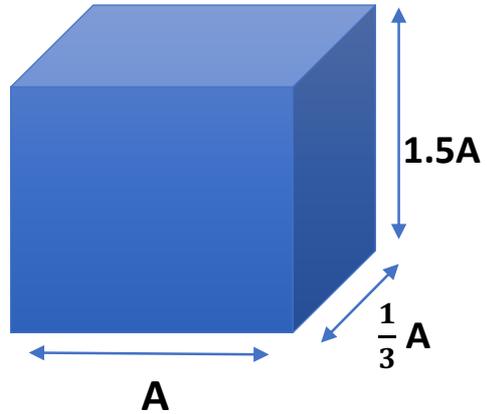
10. What is the 3rd square number subtracted from the 3rd cube number?

A	B	C	D	E
18	27	19	9	36

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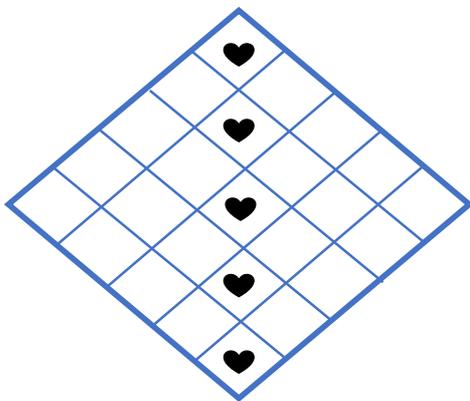
11. What percentage of the squares contain a heart inside?

_____ %

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12. Which option completes the equation.
1.4 litres + 440ml+ 1/4 litre= _____ **litres**

A	B	C	D	E
3.9	3.09	2.099	2.9	2.09

13. Which statement is correct?

A	B	C	D	E
7 x 0.4 < 2	36÷6 < 2 x 3	3.5 x 2 < 45÷9	18÷6 > 9÷3	0.8 x 9 >7

14. Georgia makes up a number sequence.
The first 5 terms are: 2, 2, 4, 6, 10.
What is the 8ᵗʰ term in the sequence?

A	B	C	D	E
39	42	44	26	36

15. The net below forms a cube. If opposite faces of the cube have a product of 12. What is the value of the missing face? _____
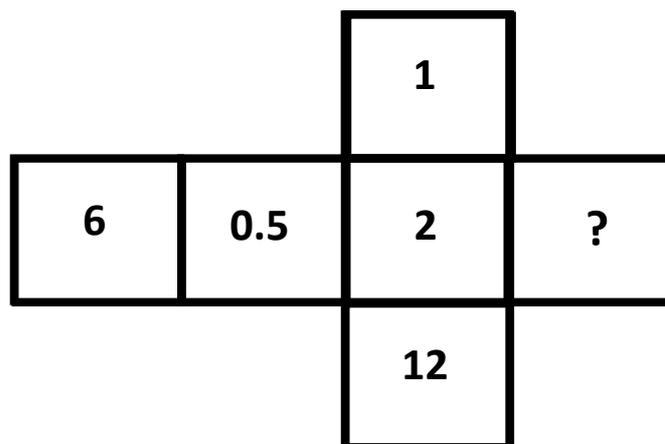
	1	
6	0.5	2	?
	12	

End of Test

Answers

1. Answer: E

If we imagine each slice of ham costs £2 each, then the cost of 25 would be 2 x 25 = £50. However, instead each slice is 1p less than £2. We can therefore subtract 1 x 25= 25p from £50 to get the answer of £49.75.

2. Answer: C

The top left square is 32 – 11 – 9 = 12.
Therefore we can work out the top middle square, 32- 12- 17= 3

3. Answer: B

Each person will receive £399.35/7= £57.05

4. Answer: B

50% of 200 is 100.
1% of 200 is 2, so 0.5% is 1.
Therefore 2.5% will be 2+2+1=5
52.5% is 100+5=105

5. The sum of the angles of a circle adds up to 360 degrees.
42+51+97+65=255. So the missing angle must be 360-255=105 degrees.

6. Answer: D

The average number of stamps the post office sold each day is 8763/1000= 8.763. As the number to the right of the decimal point is greater than 5, the number can be rounded up to give 9.

7. Answer: A

We can split the shape into two triangles and one rectangle. The area of the rectangle is 12x8=96 cm squared. And the area of both of the triangles is 6x2=12 cm squared. So the total area is 96+12=108 cm squared

8. Answer: D

An edge is where two faces meet. All triangle-based pyramids have 6 edges.

9. The volume of a cuboid is length x width x height. The length A is 6, the width is 1/3A which is 2, and the height is 1.5A which is 1.5 x 6 = 9. So the volume is 108cm^3.

10. Answer: A
The 3rd square number is : 3^2= 9
The 3rd cube number is 3^3= 27
Hence 27 – 9 = 18

11. There are 5 x 5 = 25 squares in the grid. 5 of which contain hearts, this is 5/25 as a fraction or 20%.

12. Answer: E
The question wants us to work in litres, as the answer is provided in litres. As there are 1000ml in a litre, 440ml is 440/1000=0.440 litres and ¼ litres is 0.25 litres. So 1.4+0.44+0.25= 2.09 litres

13. Answer: E
Only statement E is correct, as 0.8 x 9 = 7.2, which is greater than 7 .

14. Answer: B
The rule for the sequence is to add the two previous terms, so the next term will be 16, the 7th term will be 26 which means the 8th term is 42.

15. The product of two numbers is the result after multiplying the numbers together. The square with "0.5' is opposite to the square with the missing value when the cube net is folded up. So the answer is 12 / 0.5 = 24.