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THE PERSE

UPPER SCHOOL

CAMBRIDGE

Year 7 Entrance Exams

Maths

Specimen Paper 2

Instructions to candidates

Time allowed: 45 minutes

Instructions to candidates:

1. Show all working - you may receive marks for correct working even if your final answer is wrong. **Leave all fractions in their lowest form.**

2. Answer as many questions as you can, in any order.

3. Do not spend too long on any one question - if you get stuck, move on to the next.

4. Answers and working should be written on the exam paper in the spaces provided.

5. Calculating aids are **NOT** permitted.

1. Write in figures, the number : Sixty three thousand, four hundred and one.

Answer: _____

2. Circle all the numbers that can be exactly divided by 5

68 70 43 5 217

3. Find the missing number:

1	9	X		=	152

4. Calculate $\frac{5}{8}$ of 4000

Answer: _____

5. Calculate each of the following:

(a) 7921 + 846

Answer: _____

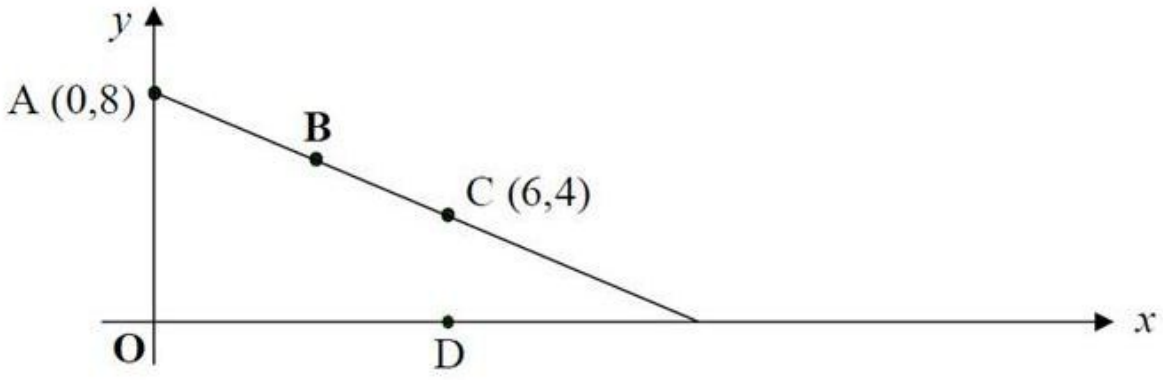
(b) 2031 - 1357

Answer: _____

(c) 73 x 8

Answer: _____

6. Here is a straight-line graph.



The points A, B and C are equally spaced.

What are the co-ordinates of the point B?

Answer: B (_____,_____)

Point D is directly below point C as shown.

What are the co-ordinates of the point D?

Answer: D (_____,_____)

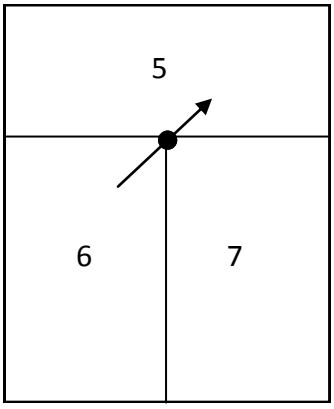
7. Which **one** of the following statements is false?

A. 2 + 5 x 4 = 22 **B.** 18 - 6 x 3 = 0 **C.** 15—2 x 7 = 1

D. 7 +1 x 3 = 24 **E.** 8 x 5 - 7 = 33

Answer: _____

8. What is the probability of scoring a 6 on this spinner?



Answer: _____

9. Choose from this set of numbers

8	9	10	11
12	13	14	15

(i) a square number Answer (i) : _____

(ii) three multiples of 3.

Answer (ii) : _____ , _____ , _____

(iii) three factors of 60.

Answer (iii) : _____ , _____ , _____

10. Look carefully at this number pattern.

$1^2 + 3 = 4$

$2^2 + 5 = 9$

$3^2 + 7 = 16$

$4^2 + 9 = 25$

Write the next two lines of the pattern

_____

_____

11. Calculate 273 ÷ 7

Answer: _____

12. In Moscow at noon it is 4˚C. By midnight the temperature has dropped by 10˚C. What is the temperature at midnight?

Answer: _____˚C

13. In magic squares, the numbers in every row, column and the two diagonals add up to the same number. What is the **sum** of the **missing** numbers in the magic square below?

4	8	9
	7	

Answer: _____

14. For Ben's birthday he goes to the cinema. Tickets cost £3.85 for children and £5.50 for adults.

In his party there are 4 children and 2 adults.

(a) How much do the tickets cost?

Answer: _____

(b) Ben's Mum hands the cashier two £20 notes for the tickets. How much change does she receive?

Answer: _____

(c) The film starts at 15:55 and finishes at 5.35pm. How long does it last?

Answer: _____

15. Ben wants to buy 17 small bottles of drink for a party. A shop sells them at: 15p for 1 bottle; 28p for two bottles; 60p for a pack of 5 bottles. What is the smallest amount of money he needs to spend? [Give your answer in £s]

Answer: £_____

16. This sequence of numbers goes up by 30 each time.

30, 60, 90, 120, 150, ……..

The sequence continues.

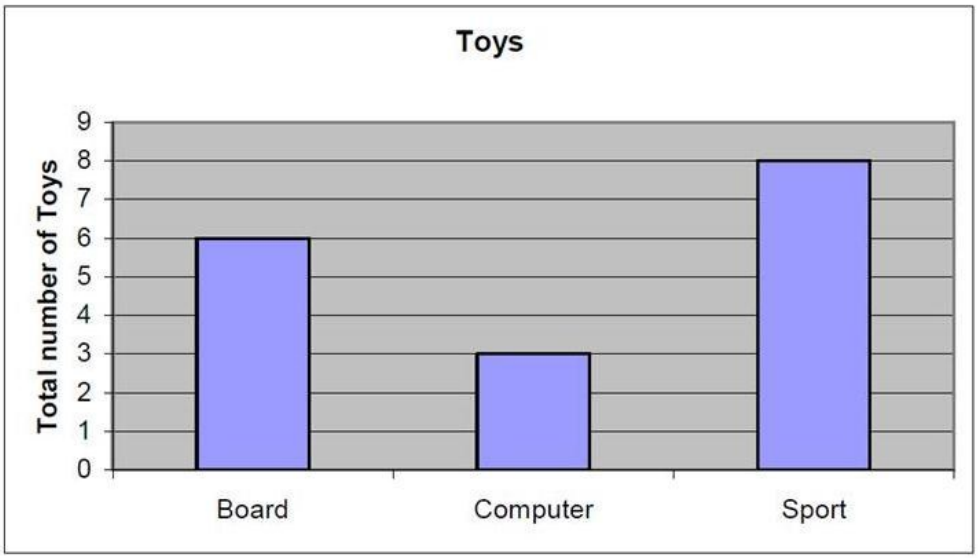
Will the number 1330 be in the sequence? Answer: _____

Explain how you know:

_____

17. Here is a table of toys owned by 6 children:

Child	*Board games*	*Computer games*	*Sports equipment*
Alan	1	3	2
Ben	3	0	3
Chris	0	2	0
David	2	1	1
Ed	1	0	0
Faizal	0	0	4



Whose toys are not on the graph?

Answer: _____

18. The four numbers 8, 3, 9 and $\square$ have an average of 6.

What number goes in the box?

Answer: _____

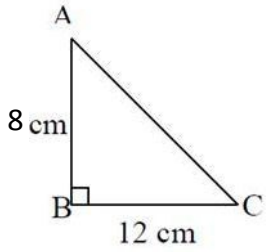
19. Fill in the spaces in the following table.

Leave all fractions in their lowest form.

The first line has been done for you.

Fraction	Decimal	Percentage
$\frac{1}{2}$	0.5	50%
$\frac{1}{4}$		
		10%
	0.85	

20.



The diagram opposite (which is NOT drawn to scale) shows triangle ABC with angle B = 90˚. AB = 8cm and BC =12cm.

(a) Complete the figure by drawing in two lines to make rectangle ABCD.

(b) What is the distance around (perimeter of) the rectangle?

Answer: _____cm

(c) What is the area of triangle ABC?

Answer: _____cm^2

21. On the planet Zog, all numbers are written with the digits in reverse order. For example, forty-five is written as 54. Pluto, an inhabitant of Zog, was given the subtraction 729—26. If no mistakes were made, what answer did Pluto write down?

Answer: _____

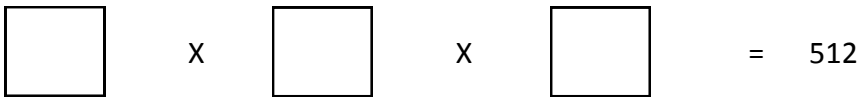
22. Which is bigger: 20% of 25 or 25% of 20?

(Marks will only be given for answers accompanied by appropriate working)

Answer: _____

23. The **same** number if missing from all three boxes.

Write the same missing number in each box.



24. Work out the following

(a) $14\frac{2}{3} - 3\frac{5}{6}$ **[Give your answer as a mixed number]**

Answer (a): _____

(b) 57.8 x 0.1

Answer (b): _____

25. What is the smallest whole number, above 120, which when divided by 53, leaves a remainder of two.

Answer: _____

Now check through your work carefully!