10+ Entrance information and materials

It is assumed that candidates are following the Year 5 Programme for Study of Mathematics, available via the DfE website (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/335158/PRIMARY_national_curriculum_-_Mathematics_220714.pdf start page 31)

If any unfamiliar notation is used it will be fully explained in the question. Some of the questions near the end of the paper are intended to be of an original nature so may seem unfamiliar to students but will draw from mathematical thinking skills being developed in Primary Schools.

TRINITY SCHOOL CROYDON

ENTRANCE EXAMINATION PRACTICE QUESTIONS

MATHEMATICS
(1 hour)

Instructions to Candidates

1. Write your name at the top of this question paper

2. Try all of the questions. Do not spend too much time on any one question - go on to the next.
   You can go back to a question if you have time at the end.

3. Show all necessary working in the space provided. DO NOT RUB OUT ANY WORKING unless you wish to change it.

4. Answers should be written on the answer line provided.

5. Do not write anything in the margins.

6. **Calculators are not allowed.**

1 Add: 3079 + 2975 + 453

This is the number of marks for the question

3 Answer: .....

2 Subtract: 3147 – 959

3 Answer: .....

3 Multiply: 57 × 48

3 Answer: .....

4 What is 2012 divided by 4?

3 Answer: .....

5 Find one twelfth of £120

2 Answer: .....

6 a) Write down the number two hundred and five thousand, three hundred and six in figures.

Answer: .....

(b) Write down in words, the value of the 5 in the number 546027

2 Answer: .....

...../16

7	Bharat buys two bottles of water at 85p each and four bars of chocolate at 72p each. How much does he spend altogether? Give your answer in £'s.	8	Jill pours out five 23 cl glasses of water from a full 150 cl bottle. How many cl are left in the bottle?
3	Answer: £.....	3	Answer: cl
9	My train left Waterloo station at 2.37 in the afternoon. Write this time in the 24 hour clock. Answer: ..... If the journey lasted two hours and forty-eight minutes, at what time did I arrive at my destination?	10	Jenny thinks of a number. She adds seventeen and then divides by six. Her answer is five. What is the number that Jenny first thought of?
3	Answer:	2	Answer: .....
11	A car travels at an average of 30 miles per hour. How long would it take to travel 10 miles? Give your answer in minutes.	12	How many **seconds** are there in eight minutes?
2	Answer: ..... minutes	2	Answer: .....seconds

13 For each part, put the values in numerical order, **smallest** first.

(a) 0.902 0.092 0.92

....

(b) $\frac{1}{4}$ $\frac{1}{5}$ $\frac{1}{3}$

....

(c) 0.89m 90 mm 90cm

....

6

14 Add together 3 kg, 94g and 1kg 9g.
Give your answer in grams.

3 Answer: .....g

15 Look at the pattern below which continues for ever (but I did not have time to write out all the numbers!).

1 3 5 7 9 11 13 15 17

Choose one word from this list which **best** describes this pattern of numbers

Square *Factors* *Odd* *Even* *Prime* Answer …….

Which number comes next? Answer …….

The fifth number in the list is 9. What do you think the 45th number in the list will be?
Answer …….

What is the sum of the first six numbers in the list?

Answer …….

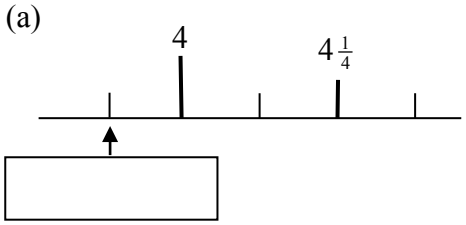
Another pattern is described as being the numbers that are two less than a multiple of 3. The first number in this pattern is also 1. Write down the **next** four numbers in this pattern.

Answer …….....

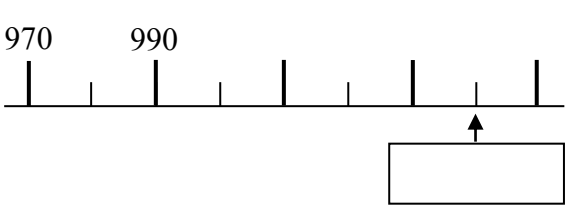
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16 Here are parts of two different number lines. Write in the number indicated by the arrow.

(a)



(b)



4

17 There are 35 children in Anita's class.
One fifth of the children have blue eyes and the rest have brown eyes.
There are 13 boys of which 4 have blue eyes.
Use the information to complete the table.

	Number of boys	Number of girls
Blue eyes	4	
Brown eyes		

3

18

Aberdeen								
513	Bristol							
473	171	Cambridge						
595	206	124	Dover					
587	83	250	244	Exeter				
482	54	153	224	128	Hereford			
279	236	252	355	310	204	Kendal		
328	219	147	272	294	188	72	Leeds	
388	185	94	219	259	153	177	142	Lincoln

Distance in kilometres

This table shows the distance between some British towns. It shows that the distance between Bristol and Kendal is 236 kilometres.

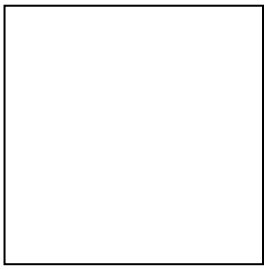
a) How far is it from Leeds to Exeter? …….

b) What are the furthest two towns on the chart? ……

c) I live in Dover but need to visit my son in Cambridge and from there go on to my daughter in Leeds before returning directly home. What total distance will I travel?

6 Answer: ..... km

19 A square has perimeter 36 cm.
Write the side lengths on the sketch below and calculate its area.



2 Answer: ..... cm^2

20 In a rectangle the length is 17 cm. The perimeter of the rectangle is 48 cm. Find the width of the rectangle.

3 Answer: .....

21 Fill in the missing numbers

a) 8 × 80 = 16 × .....

b) 60 × .....= 2400

c) .....÷ 1000 = 60

d) 275 ÷ .....= 2.75

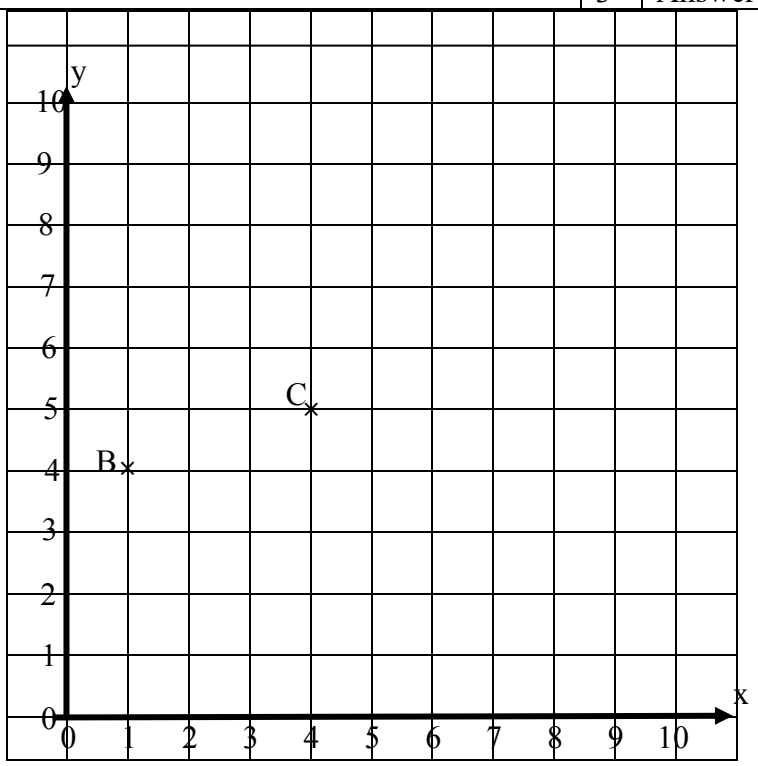
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22 Will is double the age of Bob and eight years older than Suzanne. If Suzanne is twenty years old, how much older than Bob is Suzanne?

3

Answer ……..

23



The diagram shows the points B (1, 4) and C.
What are the co-ordinates of C?

Answer: C (…. , ….)

Add, and label the point D (7,6)

If BCDE is a straight line with B, C, D and E all equally spaced and in that order, mark and label the point E on the diagram.
Write down the co-ordinates of E
Answer: E (…. , ….)

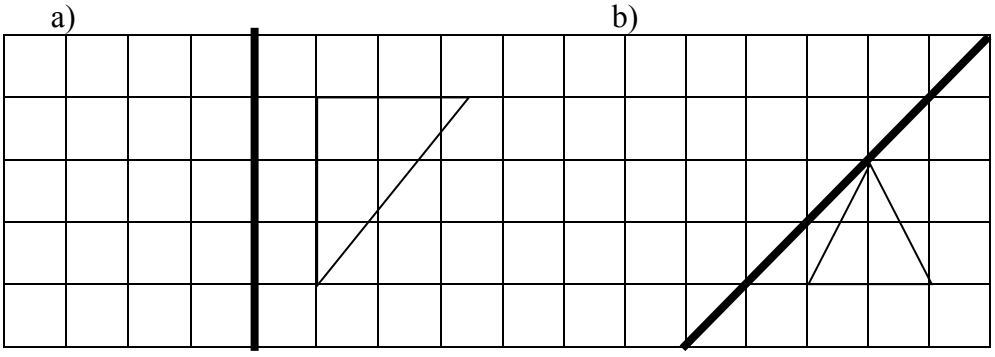
The point F (a, 8) would be on the same straight line if the graph was extended. Find the value of a.

Answer: a= ……..

4

24 Draw the **reflection** of the triangles in the mirror lines (shown in bold).

a) b)



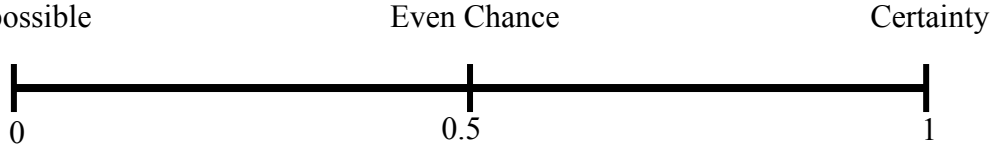
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25 Zahra has twenty coloured beads in a bag. She has 10 red beads, 5 green beads and 5 yellow bead. Zahra takes out a bead at random from the bag.

Using the probability scale below, mark these points on the scale.

Mark with an R the probability that Zahra takes out a red bead.
Mark with a G the probability that the bead is green.
Mark with a W the probability that the bead is white.
Mark with an N the probability that the bead is not yellow.



4

26 The four angles inside a quadrilateral always add up to 360°.
Use this fact to find the missing angles in the following quadrilaterals:

a) If one angle is 120° and the other angles are equal to each other, find the size of the three other angles.

Answer ……

b) Three of the angles are 53°, 88°and 137°. Find the size of the other angle.

Answer ……

c) The two largest angles are equal and the two smallest angles are equal. The larger angles are five times the size of the smaller angles.
Find the size of the larger angles.

Answer ……

6

27 Peter is making some orange squash. The directions on the bottle say that he should use three parts water to one part of concentrate.

a) He has 90 cl of water, how much squash can he make if he follows the instructions?

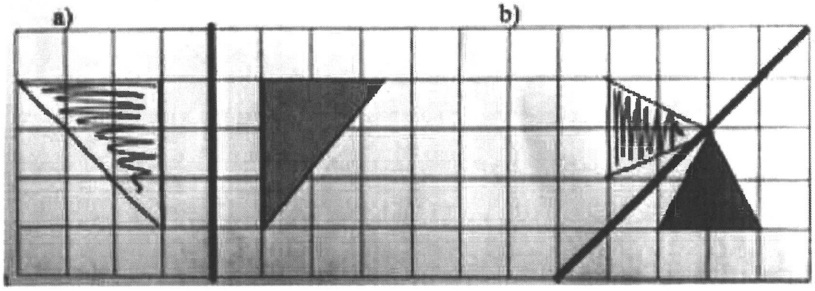
Answer ……cl

b) Next day he followed the instructions again and made 280 cl of squash. How much water did he use this time?

Answer ……cl

3

10+ Practice Answers

1. 6507
2. 2188
3. 2736
4. 503
5. 10
6. a) 205306
   b) (five) hundred thousand
7. £4.58
8. 12cl
9. a) 14:37
   b) 17:25
10. 13
11. 20mins
12. 480seconds
13. a) 0.092 0.902 0.92
    b) 1/5 1/4 1/3
    c) 90mm 0.89m 90cm
14. 4103g
15. Odd, 19, 89, 36, (1) 4 7 10 13
16. a) $3\ ^{7}/_{8}$
    b) 1040
17. Blue eyed girls 3, Brown eyed boys 9, Brown eyed girls 19
18. a) 294km
    b) Aberdeen and Dover
    c) 543km
19. 81
20. 7
21. a) 40
    b) 40
    c) 60000
    d) 100
22. 6
23. C(4,5) E(10,7) a=13
24. 

25. P(W)=0, P(G)= ¼ , P(R)= ½, P(N)= ¾ marked on line in right places!
26. a) 80
    b) 82
    c) 150
27. a) 30cl
    b) 210cl