11+ Entrance information and materials

It is assumed that candidates are following the Year 6 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 39)

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: 2015 + 528 + 7579

This is the number of marks for the question

3 Answer: .....

2 Subtract: 2015 – 867

3 Answer: .....

3 Multiply: 627 × 98

3 Answer: .....

4 What is 8784 divided by 8?

3 Answer: .....

5 Find 3% of £2800 giving your answer in pence.

3 Answer: .....p

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

Answer: .....

(b) Write down the number:
one fifth, as a decimal.

2 Answer: .....

...../17

7 Helen buys seven tins of cola and she receives £4.05 change from £10. How much does one tin of cola cost? Give your answer in pence.

3 Answer: .....pence

8 In a new office building there are 80 doors and each door is fastened by 3 hinges. If each hinge requires 5 screws, what is the total number of screws required to fit all the doors?

3 Answer: .....screws

9

Leaving	From	To	Arriving
11:11	Purley Oaks [PUO]	East Croydon [ECR]	11:16
11:23	East Croydon [ECR]	Clapham Junction [CLJ]	11:34
11:52	Clapham Junction [CLJ]	London Waterloo [WAT]	12.02

The table above shows details of my journey by train from Purley Oaks to Waterloo.
I have to change trains twice.

a) What is the name of the first station that I need to change at?

Answer ……

b) How long should I have to wait at Clapham Junction before catching my train to Waterloo?

Answer …….. minutes

c) How long should the whole journey take me from leaving Purley Oaks to arriving at Waterloo?

4 Answer: ..... minutes

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

(a) 15% $\frac{1}{4}$ 0.2

....

(b) 425 cm 430 mm 4.2 m

....

(c) 2.98 kg 2089 g 2809 g

....

6

11 Add together 7 m, 79 cm and 480 mm. Give your answer in cm.

Don't forget question 11

3 Answer: .....cm

12 Find a number **between 20 and 30** that is …

a) A prime number ……..

b) A square number ……..

c) Gives a remainder of 3 when divided by 8 ……..

d) An even number that is divisible by 7 ……..

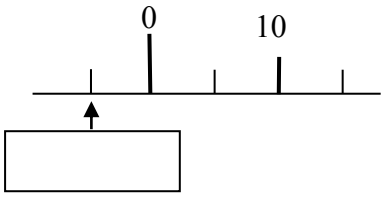
4

13 Here are parts of four different number lines. By looking at each scale carefully, write in the number indicated by the arrow.

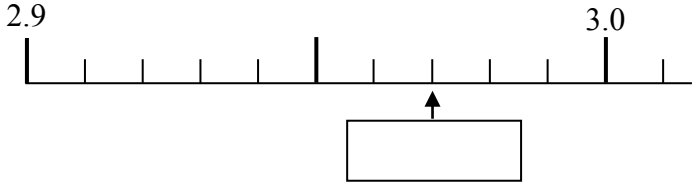
(a)



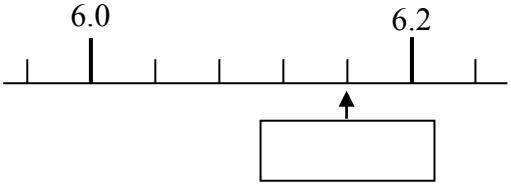
(b)



(c)



(d)



4

...../17

14 The following two improper fractions are equivalent to the mixed fraction $1\frac{3}{4}$. Complete the fractions by writing in the missing number in each case.

Answer:

$$\frac{\square}{12} \qquad \frac{63}{\square}$$

4

15

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.

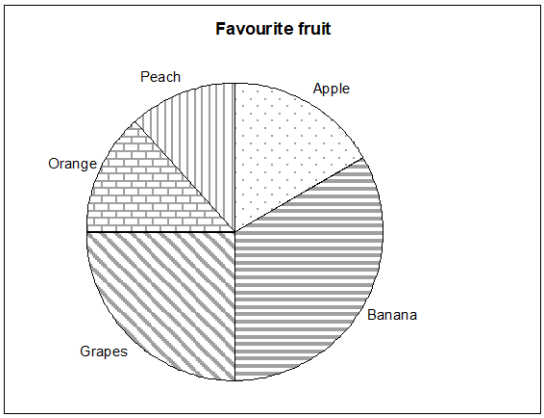
a) How far is it from Leeds to Dover? …….

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

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

5 Answer ……km

16 The Pie chart, which is not to scale, shows the favourite fruit of a group of 120 children.



(a) The angle for apple is 45º, how many children said apple was their favourite fruit.

6 Answer ……..

(b)Half of the group said that either apple or banana was their favourite. How many children said banana was their favourite fruit?

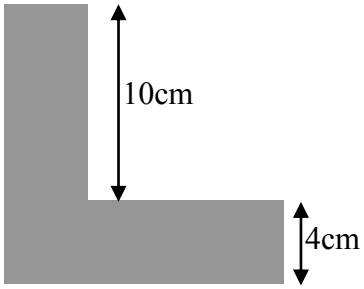
Answer ……..

(c) The angle for grapes is 90º and 2 more children preferred orange to peach. What should be the angle for peach?

Answer ……..

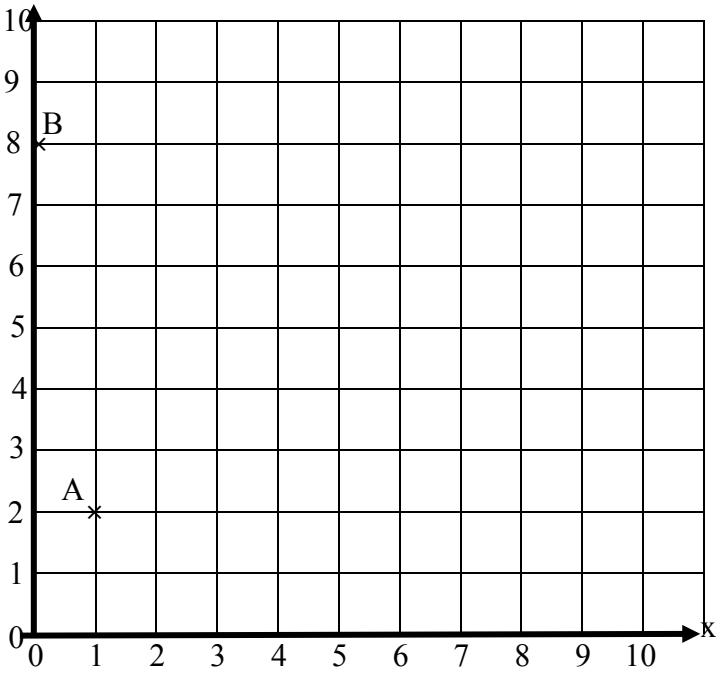
17 This L shape has one line of symmetry and was made by removing a **square** from a corner of a **square** piece of card. What is the area of the L shape?

Not to scale



4 Answer: .....cm^2

18



The diagram shows the points
A (1, 2) and B (0, 8)

a) Add, and label the point C (7, 8) onto the diagram.

b) If ABCD is a kite, with AC as the line of symmetry, plot the point D on the diagram and write down its coordinates below.

Answer D (……, ……).

c) Calculate the area of the **kite** ABCD. The scale is 1 unit to 1 cm, so give your answer in cm^2.

Use this space for your working to part c.

Answer ……cm^2

6

19 This calculation is correct: **257 × 368 = 94576**

Use this result to answer these questions:

(a) 2.57 × 3.68 Answer: .....

(b) 0.257 × 368 Answer: .....

(c) 25.7 × 3680 Answer: .....

(d) 9457.6 ÷ 2570 Answer: .....

4

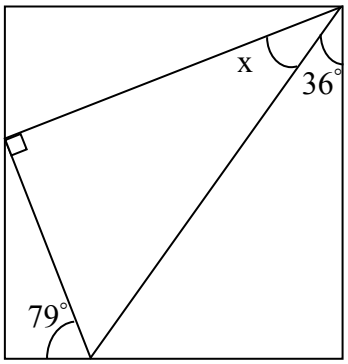
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20 a) In the space on the right, draw a quadrilateral (four sided shape) that has exactly two pairs of parallel sides and no right angles.

b) In the space on the right, draw a pentagon that has one reflex angle, two right angles and one line of symmetry.

6

21 Here is a **right angled triangle** inside a **rectangle**. Calculate the value of angle **x**.
Do **not** use a protractor or angle measurer, **the diagram is not to scale.**



4 Answer …….

22 A jar with 5 chocolates in it has mass 185g and the same jar with 17 chocolates in it has mass 317g.
What is the mass of the jar with 10 chocolates in it?

5 Answer .....g

23 The buddy of a number is the found by doubling the number and subtracting the result from 24.
e.g. the buddy of 9 is 24 – 18 = 6

a) Find the buddy of 13.

Answer: ……

b) Find the number whose buddy is 19

Answer: ……

c) Find the number that is its own buddy.

Answer: ……

6

24 Silvia makes a sequence of four numbers finishing with 80.
She gets the **next number** in the sequence **by multiplying by 3 and adding 2 each time.**
Find the three numbers that come before 80 in her sequence.

.... 80

Simon makes a sequence of numbers starting with **284.**
To get the next number, he divides by 4 and then adds the same amount each time.
The second number is **76**.
Write down the **next two** numbers in his sequence.

284 76 ...…..... .....

Eric makes a sequence of five numbers starting with **107.**
He **subtracts the same amount** each time. His last number is **35.**
Write down the **missing three** numbers in his sequence.

107 35

6

11+ Practice Answers

1. 10122
2. 1148
3. 61446
4. 1098
5. 8400p
6. a) 503608
   b) 0.2
7. 85p
8. 1200 screws
9. a) East Croydon
   b) 18mins
   c) 51mins
10. a) 15% 0.2 ¼
    b) 430mm 4.2m 425cm
    c) 2089g 2809g 2.98kg
11. 827cm
12. a) 23
    b) 25
    c) 27
    d) 28
13. a) 2410
    b) -5
    c) 2.97
    d) 6.16
14. 21 36
15. a) 272km
    b) Bristol and Hereford
    c) 633km
16. a) 15
    b) 45
    c) 42
17. 96
18.
    b) (7,1)
    c) 42cm^2
19. a) 9.4576
    b) 94.576
    c) 94576
    d) 3.68
20. many
21. 43
22. 240g
23. a) -2
    b) 2.5
    c) 8
24. a) 2 8 26
    b) 24 11
    c) 89 71 53