



SURBITON

HIGH SCHOOL

Entrance Examination: Sample Maths Questions and Guidance

The Maths department would recommend using the CorbettMaths Primary [website](#). In particular, the [5-a-day](#) questions are very useful for regular retrieval of a range of topics.

The entrance examination lasts for one hour and has a total of 60 marks. The questions in the paper become progressively harder and pupils aren't expected to complete the whole paper. There are three sections:

- Section A covers basic numeracy skills
- Section B focuses on problem solving using numeracy skills and section
- Section C covers other areas of Maths that are listed in the KS2 National Curriculum

Example Questions

1) $234 + 578$

2) $902 - 387$

3) 23×76

4) $296 \div 8$

5) $730 \div 1000$

6) $3.2 + 6.41 + 0.207$

7) 5.6×2.4

8) $(2 + 3)^2 + 4 \times 5$

9) How many quarters are there in 3.5?

10) Simplify $\frac{42}{56}$



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11) $\frac{3}{5} + \frac{1}{9}$

12) What number is three times bigger than two ninths?

13) Find 45% of £540

14) Round 18.78 to

- a. The nearest whole number
- b. One decimal place

15) Write three factors of 36 that are not factors of 24

16) Which is better value - a 2.5kg bag of carrots costing £5 or a 4kg bag of carrots costing £7.70?

17) Every time Erica washes the car her mother gives her £1.40. How many times must she wash the car to make more than £12?

18) Kate has £13. James has £28.

James gives Kate some money so that they now have the same amount of money.
How much does James give Kate?

19) Julie has some money. She spent £1.55 on a coffee and £2.25 on a muffin. She has four-fifths of her money left. How much money did Julie have to start with?

20) Write down a number that could go in each of the sections A, B, C and D.

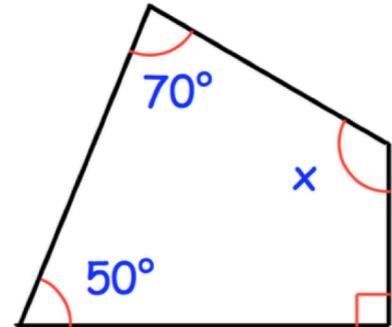
	multiple of 5	not a multiple of 5
square number	A	B
not a square number	C	D



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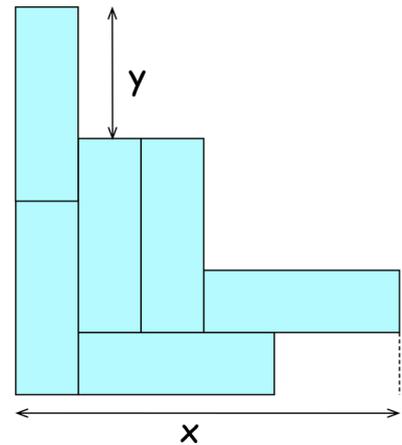
21) Find the size of angle x



22) Megan has some rectangles. They each measure 32cm by 9cm.



She makes the design below with six of the rectangles.



Work out the length of x and the length of y .

23) The following tables gives the cost (in £) of some one-way train journeys from London; it is possible to travel in First Class or Standard Class, with First Class being more expensive.

	First Class	Standard Class
Amsterdam	120	80
Berlin	65	40
Paris	80	60

a. Every month Anna travels from London to Berlin and back in Standard Class. How much does this cost her every year?



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- b. Maria travels to Amsterdam four times in First Class. How many trips to Amsterdam could she have made for the same price if she had travelled in Standard Class?
- c. Claire travelled from London to Paris in First Class, from Paris to Amsterdam in Standard Class, and then back home to London in First Class. If the total cost of her journey was £290, how much is a Standard Class tickets from Paris to Amsterdam?

24) Seven girls are arranged in a line as shown:

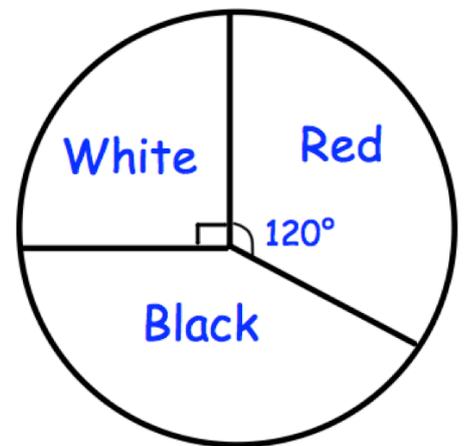
Mary Joanna Sarah Ann Gillian Emma Katie

The girls change places: Mary swaps with Emma, Joanna swaps with Sarah and Gillian swaps with Ann.

- a. Sarah is now sitting between which two girls?
- b. Who does Katie end up sitting next to?

25) A bag contains red, white and black counters.

The pie chart below shows information about the counters in the bag.



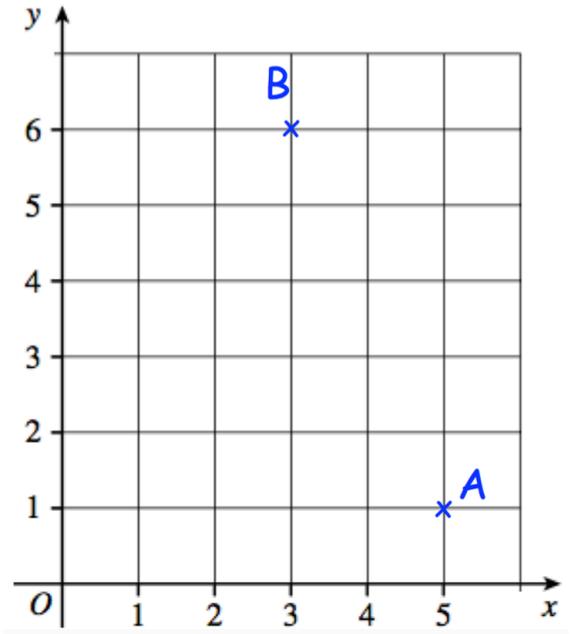
There are 48 counters in the bag.
How many counters are black?



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26) A , B and C are the vertices of an isosceles triangle.



Write down the coordinates of point C .



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Answers

1) 812

2) 515

3) 1748

4) 37

5) 0.73

6) 9.817

7) 13.44

8) 45

9) 14

10) $\frac{3}{4}$

11) $\frac{32}{45}$

12) $\frac{6}{9}$ or $\frac{2}{3}$

13) £243

14)

a. 19

b. 18.8

15) 9, 18, 36



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16) 4kg bag

17) 9 times

18) £7.50

19) £19

[Click here to watch a video explanation](#)

20) E.g. A = 25, B = 9, C = 20, D = 13

21) 150°

22) $x = 59\text{cm}$, $y = 23\text{cm}$

[Click here to watch a video explanation](#)

23)

a. £960

b. 6

c. £90

24)

a. Emma and Joanna

b. Mary

[Click here to watch a video explanation](#)

25) 20

26) (1, 1)