

St Anselm's College



Maths Sample Paper 1

45Mins

No Calculator Allowed

- 1) The area of the United Kingdom is about 243,600 km².
Write this area in words.

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- 2) The area of Australia is 7 692 024 km². Write this area in words.

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- 3) Look at the New York Subway train timetable below and then answer the questions on the next page.

Brooklyn Bridge	12:08	12:18	12:28	12:38	12:48	13:00	13:15
Bleecker Street	12:12	12:22	12:32	12:42	12:52	13:04	13:19
Astor Place	12:14	12:24	12:34	12:44	12:54	13:06	13:21
Grand Central Terminal	12:21	12:31	12:41	12:51	13:01	13:13	13:28
68th Street	12:25	12:35	12:45	12:55	13:05	13:17	13:32
125th Street	12:35	12:45	12:55	13:05	13:15	13:27	13:42
3rd Ave & 138th Street	12:38	12:48	12:58	13:08	13:18	13:30	13:45
Hunts Point Avenue	12:47	12:57	13:07	13:17	13:27	13:39	13:54
Parkchester	12:53	13:03	13:13	13:23	13:33	13:45	14:00
Pelham Bay Park	13:02	13:12	13:22	13:32	13:42	13:54	14:09

a) I need to catch a train from Bleecker Street to ensure I arrive at Pelham Bay Park **before** 13:30. What time does the latest train I could catch leave Bleecker Street?

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b) How many minutes does the train's journey from Brooklyn Bridge to 125th Street take?

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c) Write 14:00 using am or pm time.

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4) I buy 5 items which cost £12.98 each.

a) What is the total cost?

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b) If you worked out the answer to part (a) on a calculator, what would the display show?

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5) I live 5.2 km from Anfield.

a) How far is this in metres?

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b) Goodison Park is a further 1200 m from my house. How many **kilometres** is Goodison Park from my house?

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c) A kilometre is $\frac{5}{8}$ of a mile. How many miles away from Goodison Park do I live?

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6) A man starts work at 08:15. He then has a break from 10:15 to 10:35. After his break he continues working until 12:50.

a) For how many hours and minutes was he working?

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b) If he is paid £6.00 for each hour worked, how much will he be paid for all the work?

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7) Solve the following:

a) I think of a number, divide it by 7 and add 9. The result is 17. What was the number I first thought of?

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b) There is a number, n . When I add 3 to n then multiply the answer by 4, the overall result is the same as just multiplying n by 6. What is n ?

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8) Write the next two numbers for each of the following sequences.

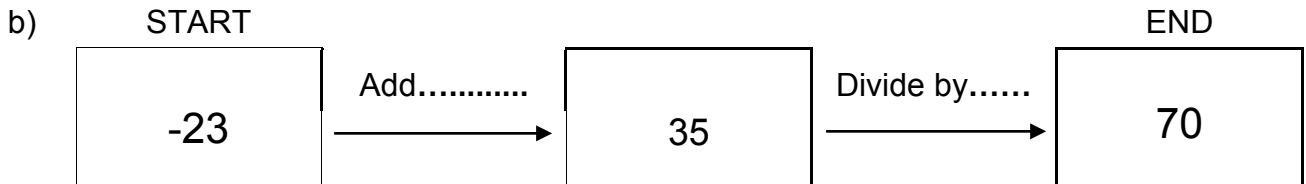
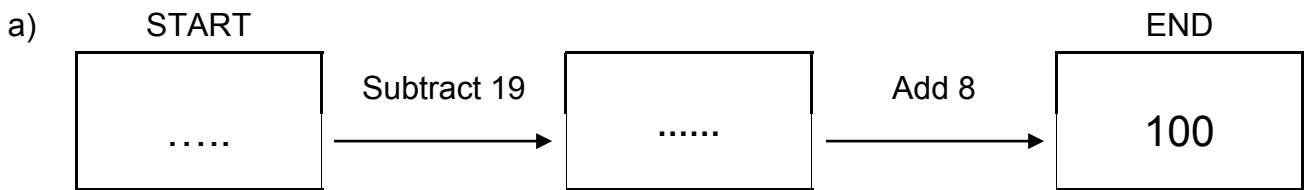
a) 64 69 74 79 84

b) 64 49 34 19 4

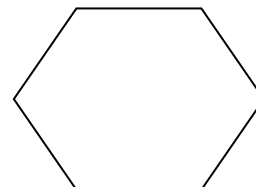
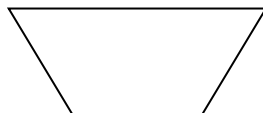
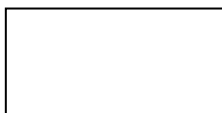
c) 64 32 16 8 4

d) 64 16 4 1 $\frac{1}{4}$

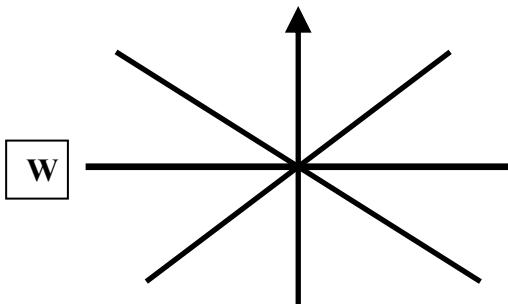
9) Complete the spaces shown by dotted lines below.



10) Here are some 2D shapes. Write the name of each shape underneath it.



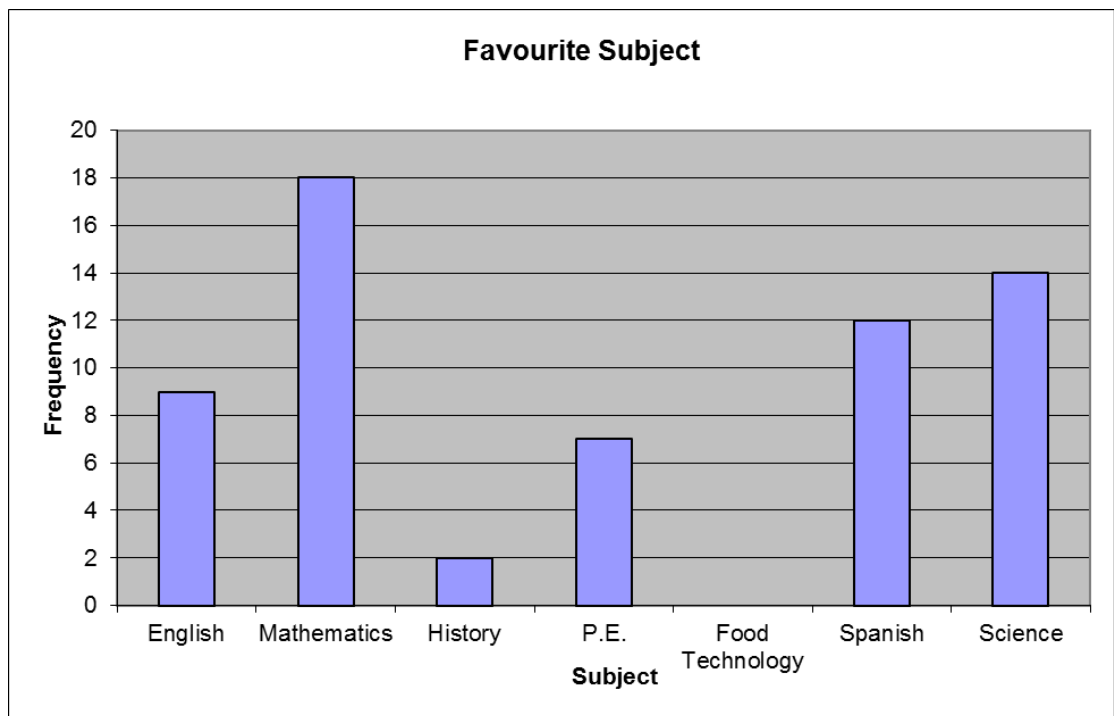
11) Complete the diagram to show the 8 points of the compass.



Imagine you are facing west. If you turn through 270° anti-clockwise, which way are you then facing?

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12) A number of Year 7 pupils were asked to choose a favourite subject from a list of seven subjects. The number choosing each subject is shown in the chart below.



a) How many pupils chose Mathematics as their favourite subject?

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b) How many pupils were questioned in the survey?

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c) Which subject is it most likely they have not studied yet?
Explain how you know.

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13) Tickets for the zoo cost £12.50 for adults and £8.00 for children.

a) How much would it cost for 6 adults to go to the zoo?

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b) How much would it cost for 3 adults and 4 children?

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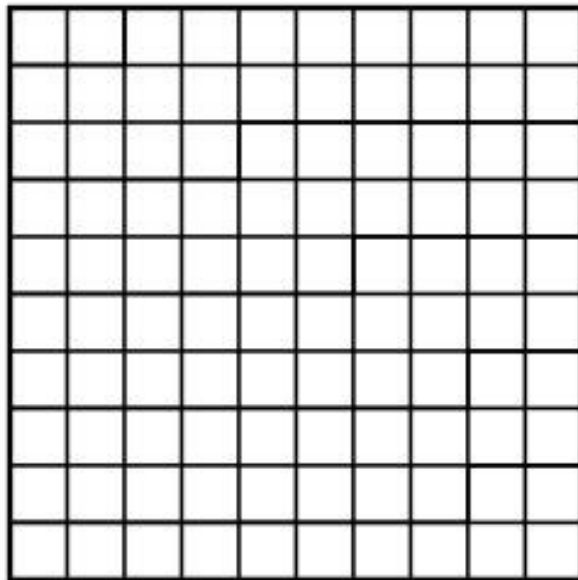
c) The zoo has a Family Ticket for sale which allows two adults and three children to visit the zoo. The ticket costs £38.00. How much is saved by buying the Family Ticket instead of five separate tickets?

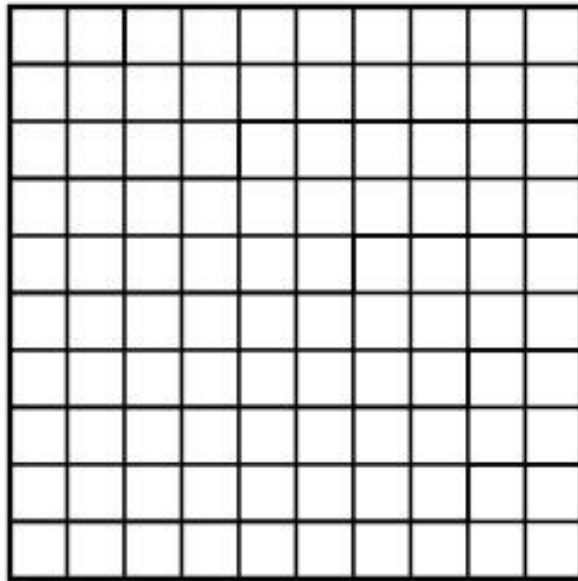
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14) Answer the questions on the next page using the grids.





a) Shade the first grid so that three fifths are shaded.

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b) Shade the second grid so that 64% is shaded.

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c) What **fraction** of the second grid have you shaded? Give your answer in its simplest form.

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d) Is it possible to shade one sixth of a grid by shading only whole squares? Explain how you know.

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15) In a giant tube of Fruit Pastilles, 20% are orange. If the tube has a total of 85 sweets, how many are **not** orange?

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16) Round each of the following numbers to the accuracy given in brackets.

a) 132.7521245 (nearest whole number)

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b) 12236 (nearest thousand)

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c) 124.0754896 (nearest hundredth)

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17) Write the following numbers in order of size, starting with the smallest.

0.105 0.115 0.1 0.11 0.015 0.101

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18) I have a bag containing green, yellow and blue counters. A counter is chosen at random from the bag. There are 15 green counters in the bag and the probability of choosing a green counter is $\frac{1}{3}$. The bag contains 9 yellow counters. How many blue counters are there in the bag?

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19) Which of the following distances is closest to 6 feet?
Circle the letter of your answer.

- a) 110 cm
- b) 1.8 m
- c) 12 m
- d) 1500 mm

20) A calculator normally costs £24.40. It is offered in a sale at 15% off. What is the sale price?

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21) Look at the list of numbers below.

1 5 8 9 17 23 25 81 125 1000

a) Which of the numbers are square numbers?

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b) Which of the numbers are cube numbers?

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c) Which of the numbers have exactly two factors?

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d) Numbers with only two factors have a special name. What is it?

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22) Number $A = 12 \times$ Number B and Number $B = 3 \times$ Number C

a) What fraction of Number A is Number B ?

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b) How many times bigger than Number C is Number A ?

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c) What fraction of Number B is Number C ?

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d) Give three possible values of the numbers.

$A =$

$B =$

$C =$

23) Today Michael is half of Anthony's age and Paul is four years older than Michael.

In three years Paul will be the same age as Anthony is today.

How old are the three boys today?

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