St. Francis' College
Practice Entrance Examination
for entry into Year 7



Mathematics Paper
Time allowed – 1 hour

Name:_____

Date of birth:_____

Present school:_____

Please attempt as many questions as you can.

If you cannot do a question leave it out and if you have time you can come back to it at the end.

You should show **all** of your working out in the spaces provided.

Calculators are **not** allowed.

1. 239 + 1486 = ...

2. 547 – 298 = ...

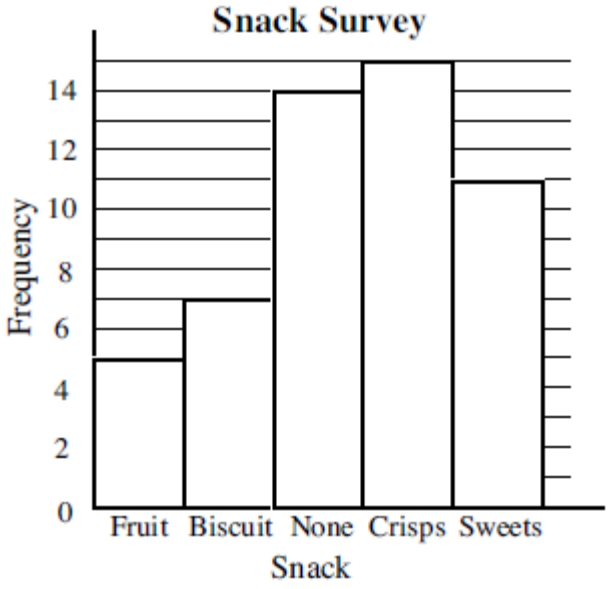
3. 13 x 8 = ...

4. 195 x 47 = ...

5. 207 ÷ 9 = ...

6. 1081 ÷ 23= .....

7. Sophie carried out a survey and asked her friends what their favourite snack was at break time. The bar chart below shows her results.



a) How many liked fruit best? .....

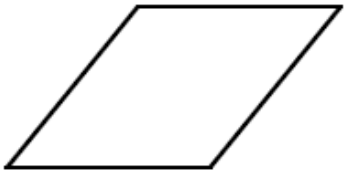
b) How many more people liked crisps than biscuits?

.....

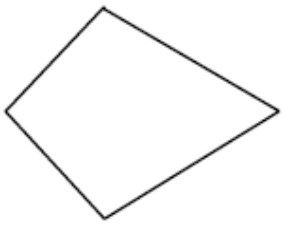
c) How many friends did she ask in total?

.....

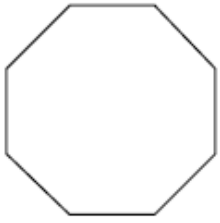
8. Underneath each shape write down its name.



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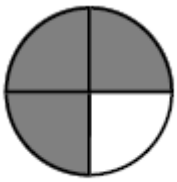
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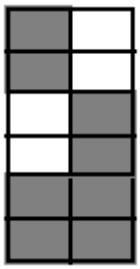
9. Write down the fraction shaded. Where possible give the fraction in its simplest form.

a)



.....

b)



.....

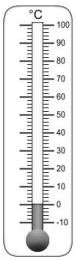
10. How many

a) centimetres are there in 70mm? .....

b) grams are there in 4kg? .....

c) millilitres are there in 3 litres? .....

11. The temperature recorded on one day in 5 different cities in the world are shown below.



-12^0c 8^0c 19^0c -4^0c 23^0c

What is the difference in temperature between the hottest and the coldest cities?

.....

12. Write the following in order of size, smallest first

a) 2.34 2.4 3.42 2.43 4.3

.....

b) $\frac{1}{2}$ 0.55 48% $\frac{2}{5}$ 0.467

.....

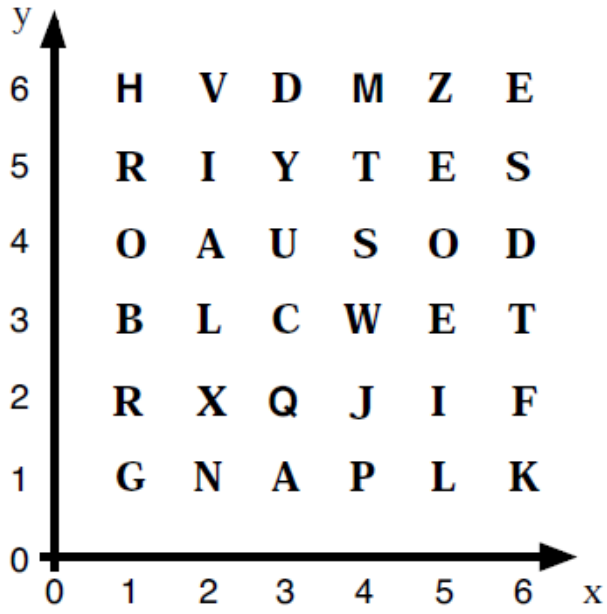
13. Find

a) $\frac{1}{2}$ of 34 .....

b) $\frac{2}{9}$ of 72 .....

c) $\frac{1}{3}$ of $2\frac{1}{4}$ .....

14.



a) What Maths word is spelt out by these coordinates?

(5 , 4) (1, 3) (6, 3) (3, 4) (6, 5) (5, 3)

.....

b) What does this word mean?

.....

15. Write down the next two numbers in each of the following sequences.

a) 3 6 12 24 48 ....

b) 58 57 55 52 48 ....

16. Write down

a) all the factors of 24 .....

b) the first 4 multiples of 7 .....

c) the third square number .....

d) the fifth prime number .....

17. There are 27 students in Miss Calculation's class. Miss Calculation buys 4 boxes of chocolates. There are 36 chocolates in each box. She shares the chocolates out equally among her 27 students.

a) How many chocolates will each student receive?

.....

b) How many chocolates will be left over?

.....

18. A child's heart beats 80 times per minute. How many times will it beat between 8.30am and 3.30pm on the same day?

.....

19. 2 packets of crisps and 2 drinks cost £1.50. 2 packets of crisps and 1 drink costs £1.10. How much would 4 packets of crisps and 3 drinks cost?

.....

20. The number of goals scored by St Francis' netball team in their last 10 games are as follows.

7 2 12 10 5 3 7 11 6 4

Find the mean .....

21. Round 7285 to the nearest

a) 10 b) 100 c) 1000

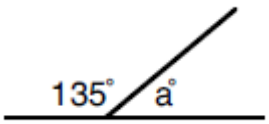
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22. Hannah went to the shop. She bought a magazine that cost £3.50, 3 bars of chocolate that cost 55p each and a packet of sweets. She paid with a £10 note and was given £4.20 change. How much did the sweets cost?

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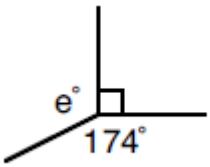
23. Calculate the angles marked with letters on the following diagrams.

a)



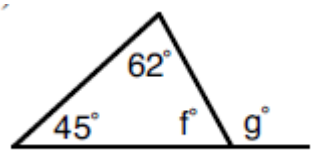
Angle a = ...

b)



Angle e = ...

c)



Angle f = ...

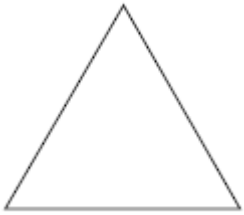
Angle g = ...

24. Draw all the lines of symmetry on the diagrams below.

a)



b)



25. Find

a) 10% of £83

.....

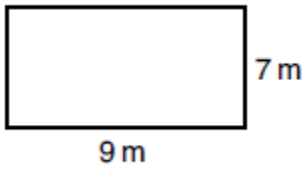
b) 75% of 44kg

.....

c) Increase £120 by 30%

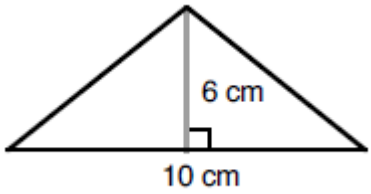
.....

26. Find the area and perimeter of this shape. Give the units with your answer.



Area ..... Perimeter .....

27. Find the area of this shape. Give the units with your answer.



Area .....

28. A box contains 7 red smarties, 4 blue smarties, 5 orange smarties and 2 pink smartie. If a smartie is picked at random what is the probability of getting

a) a red smartie? .....

b) a blue or pink smartie? .....

c) not an orange smartie? .....

29. Calculate

a) $14 + 8 \div 2 =$ .....

c) $17 + 3 \times (5 - 1) =$ .....

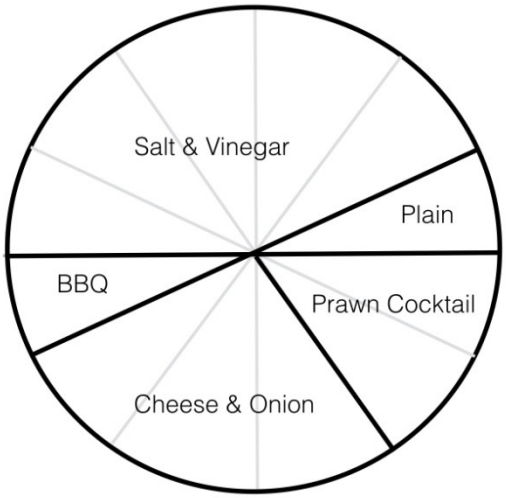
30. Pippa came home from her holiday at her Grandma's with 5 books. Whilst she was away she bought 2 books from the bookshop and got 1 book as a present from her Grandma. During her stay at her Grandma's she gave her cousin 4 books that she had finished. How many books did Pippa take with her when she left for her holiday?

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31. I think of a number, multiply it by 2 and subtract 5. The answer is 11. What is my number?

.....

32. Emily carried a survey and asked her friends what their favourite flavour of crisps is. She drew a pie chart of her results.



a) What fraction of her friends liked cheese and onion the best?

.....

b) If 6 of her friends liked prawn cocktail best, how many of her friends said salt and vinegar were their favourite flavour?

.....

c) How many of Emily's friends took part in the survey?

.....

33. The timetable below shows some train times from Birmingham to York.

Birmingham New St	0655	0755	—	0844	0958	1044	—	1144	1258
Tamworth	0714	0814	—	—	—	—	—	—	—
Burton-on-Trent	0726	0827	—	—	—	—	—	—	—
Derby	0739	0842	—	0923	1037	1123	—	1223	1340
Chesterfield	0802	0907	—	0946	1100	1146	—	1246	1406
Sheffield	0817	0924	—	1001	1115	1201	—	1301	1425
Doncaster	0844	—	—	—	1142	—	—	—	—
Wakefield Westgate	—	0957	—	1030	—	1230	—	1330	1459
Leeds	—	1018	—	1048	—	1248	—	1348	1518
York	0911	1053	—	1115	1208	1319	—	1415	1551

a) What time does the 07:55 from Birmingham arrive in York?

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b) Mrs Jones arrives at Derby station at 11:10. How long does she have to wait for the next train to Sheffield?

.....

d) How long does the 11:44 from Birmingham take to get to York?

.....

34. In 1990 a new 5p coin was minted. The old size weighs 5.65g while the new size weighs 3.25g. How much lighter will your pocket be if it contains £2 worth of the new size coins instead of the old size.

.....

35. Sophie should have divided a number by 4, but instead she subtracted 4. She got the answer 88. What should her answer have been?

.....

36. Snow White wanted to know the mean height of the Seven Dwarves. One day she measured them all as they left for work and calculated their mean height as 114.5cm. Grumpy complained that she had missed him out and had measured Dopey twice without him noticing. If Grumpy is 14cm taller than Dopey, what is the mean height of the Seven Dwarves?

.....

37. A school has 657 pupils. There are 384 pupils in Year 9 or above and 376 in Year 9 or below. How many pupils are there in Year 9?

.....

38. Both 4 and 8 can be written as the sum of two prime numbers (4 = 2 + 2, 8 = 3 + 5). How many numbers less than 20 cannot be written as the sum of two prime numbers?

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Well done!

You have now completed the practice Entrance Exam.

Go back and check through your work carefully.