St. Francis' College

Practice Paper

MATHS

Entry into Year 7

Time allowed – 1 hour

Please attempt as many questions as you can. You should show ALL of your working in the spaces provided or on the facing page. (Marks are given for working).

Marks for the questions are shown in brackets at the end of each question.

Calculators are NOT allowed.

1. 9039 + 93 (1 mark)

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2. 854 x 100 (1 mark)

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3. 43242 ÷ 100 (1 mark)

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4. 8234 – 909 (1 mark)

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5. 9321 – 899 (1 mark)

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6. 249 x 31 (2 marks)

7.

a) Find 84 x 30 (2 marks)

b) Find 84 x 29, if possible from your answer to (a).
Make sure you show your working. (3 marks)

8.

a) How many halves ($\frac{1}{2}$) are there in 12? (1 mark)

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b) How many tenths ($\frac{1}{10}$) are there in 10? (1 mark)

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9. Natalie went to the local shop for her mother. How much change would she receive from £5 if she bought:

3 litres of milk costing 31p per litre
2 packets of crisps at 17p each
1 large loaf of bread at 78p
1 magazine costing £1.05 (4 marks)

10.

a) Find $\frac{3}{4}$ (three quarters) of 200. (2 marks)

b) What is $\frac{2}{3}$ (two thirds) of £3.51? (3 marks)

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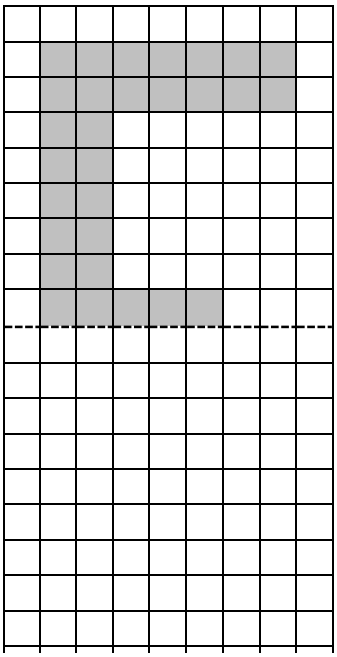
11. Draw ALL the lines of symmetry on the following letters.

H I J Y Z

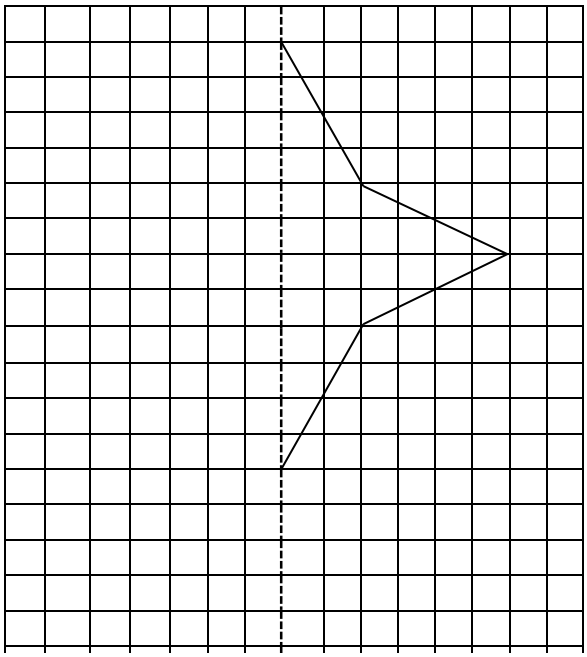
(5 marks)

12. Reflect each of the shapes in the dotted line.

a)



b)



(2 marks)

13.

a) How many kilometres are there in 8750 metres? (1 mark)

b) How many centimetres are there in 1.05 metres? (1 mark)

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14. Write down 3 factors of the number 12. (2 marks)

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15. Add together the numbers:

1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 (1 mark)

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16. How much larger is 8 x 9 x 10 than 1 x 2 x 3? (2 marks)

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17. Calculate (302 x 3) + (302 x 7) by working out the brackets first. (3 marks)

Look closely at your answer and at the question.
Do you notice any pattern in the numbers? (2 marks)

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18. Fill in the 2 missing numbers on each line.

a) 3, 6, 12, ---, 48, --- (2 marks)

b) 21, 28, ---, 42, ---, 56 (2 marks)

c) 1, $\frac{1}{2}$, ---, $\frac{1}{8}$, --- (2 marks)

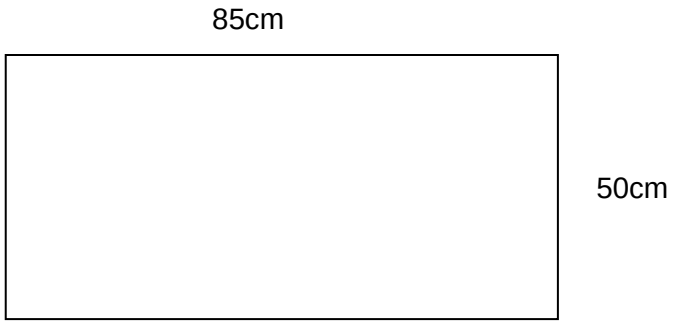
d) 1, 2, 3, 5, ---, 13, --- (2 marks)

[Hint for d): look at the last two numbers]

e) 1, 4, 9, ---, 25, ---, 49 (2 marks)

19.

a) Find the area of this carpet tile. (2 marks)



b) What is the perimeter of the above tile? (2 marks)

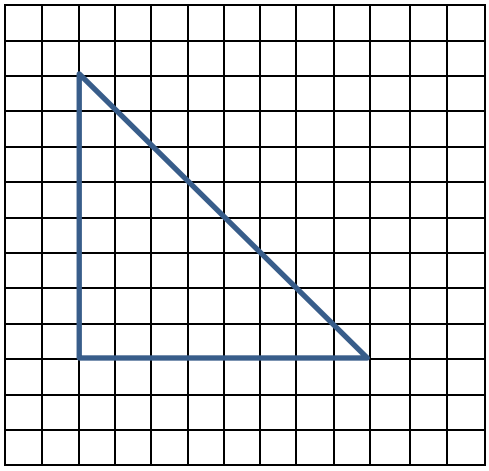
c) A room measures 8.5m by 5m. How many tiles are needed to ensure the whole room is covered? (2 marks)

d) These carpet tiles are sold in boxes of 6.
How many boxes are needed? (4 marks)

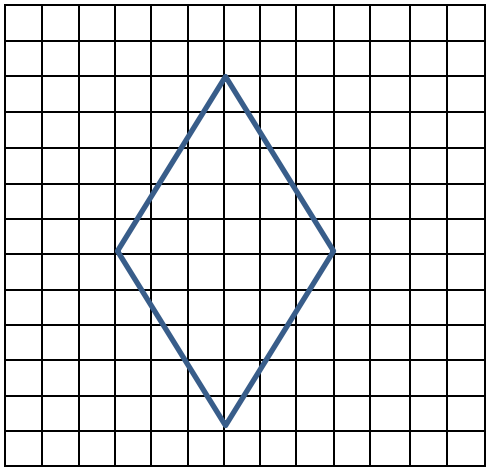
e) If each box costs £10.99, what is the cost of carpeting the room? (3 marks)

20. Find the area of these shapes:

a) The triangle (2 marks)

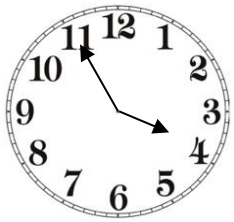


b) The rhombus (3 marks)



Show your methods clearly.

21. Write down the time shown on the clock in 12 hour and in 24 hour time.



a) if it is morning:

12 hour 24 hour (1 mark)

b) if it is afternoon:

12 hour 24 hour (1 mark)

c) A flight leaves Heathrow at 9.13 am and arrives in Moscow at 2.04 pm (London time). How long has the flight taken?

(3 marks)

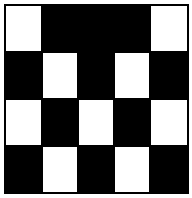
22. For each diagram:
    a) Write down the fraction shaded.
    b) What is this as a percentage?

Diagram 1:

a) Fraction that is shaded

b) Percentage that is shaded

Diagram 2:

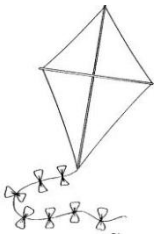


a) Fraction that is shaded

b) Percentage that is shaded

(1 + 2 + 1 + 2 marks)

23.


Kite 65p

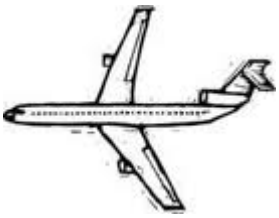

Doll £1.25


Car 72p


Chess Set £1.44


Large Ball 75p


Roller Skates £3.50


Aeroplane £2.22


Book £1.25


Crayons 45p


Sewing Set £3.99


Colouring Book 35p


Train Set £5.99

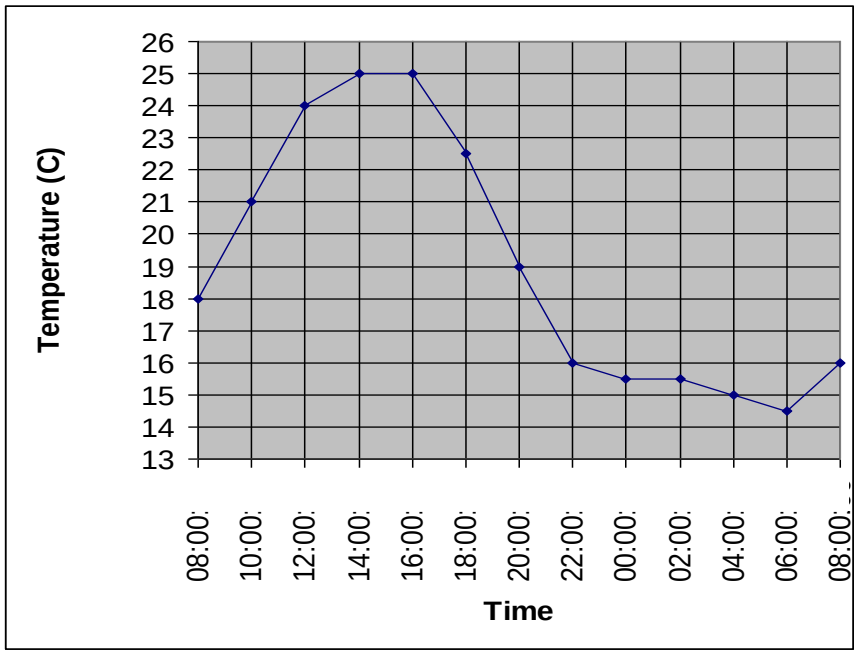
a) Add the prices of the three most expensive toys. (3 marks)

b) How many kites could be bought for £5? (3 marks)

c) How much change would there be from £5 if these kites were bought? (1 mark)

d) How much more would 3 pairs of roller skates be than 2 sewing sets? (3 marks)

24.



The graph shows the temperatures in Guildford on one day last Summer. Study the graph then answer the questions:

a) For how long was the temperature 25ºC? (1 mark)

b) At what time was the temperature 15ºC? (1 mark)

c) What happened to the temperature between 4pm and 10pm? (2 marks)

d) What do you think the weather was like on this particular day? (1 mark)

25. Which of the following numbers is closest to 100?

199 99.9 100.2 100.029 98.999 (1 mark)

26. If 6 bars of chocolate cost £3.18, how much do 5 bars cost? (3 marks)

27. Arrange the following in order of size starting with the smallest.

a) 8, 7.9, 8.03, 80.2, 79 (2 marks)

b) 2 feet, 3cms, 1 inch, 1.5m, 90mm (3 marks)

28. Write in figures the number “one hundred and three thousand, two hundred and five”.

(1 mark)

29. The numbers in this magic square in each row, column and diagonal, have the same total.

Fill in the rest of the magic square.

10	5	6
	7	

(5 marks)

30. The graph shows the ages and the number of children who live in Cyprus Crescent.

Children in Cyprus Crescent (age in years)	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
Key:  stands for 1 child	

a) How many children are 5 years old? (1 mark)

b) How many are OVER 12 years old? (2 marks)

c) How many children are there altogether? (2 marks)

d) What is the most common age? (1 mark)

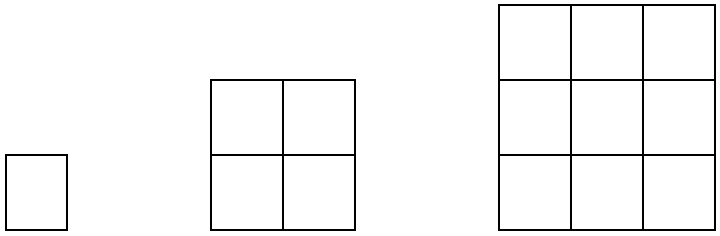
NOW GO BACK AND CHECK YOUR WORK CAREFULLY.

When you are fully satisfied please spend any remaining time with the following puzzles.

Please show all your working.

PUZZLE 1 – SQUARES

Count the squares. Can you find a pattern?



1 square

There are 4 small
and 1 larger square
4 + 1 = 5 squares

How many squares are there in the third drawing?

Draw the next drawing. How many squares are there in this one?

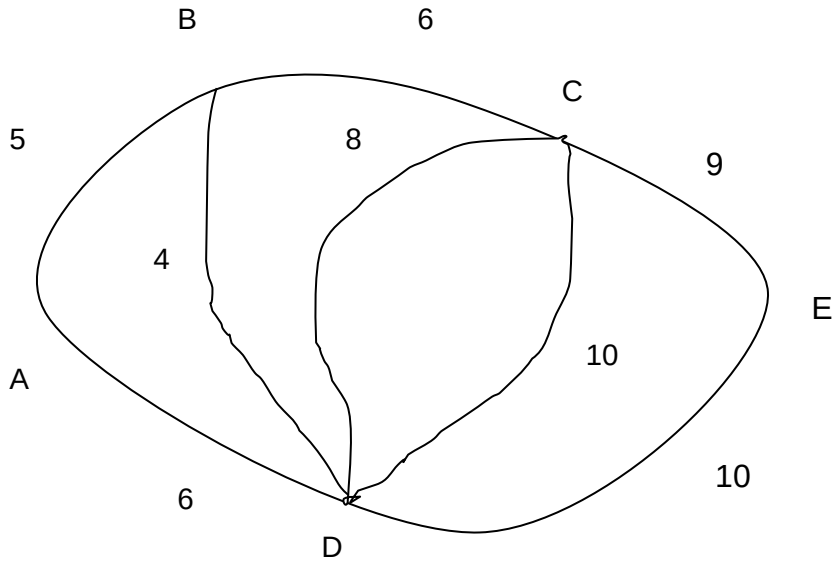
Can you notice a pattern?

How many squares do you think there will be in the next pattern?

Check by drawing.

PUZZLE 2 – POSTMAN PAT

Postman Pat has a large round of villages to which he must deliver some parcels. He lives in Village A. The numbers are the miles between each village.



Your job is to find the shortest way. He must visit all the villages but go as few miles as possible.

Try different possibilities, and write them down.

Finally, write down the villages in the best order and a sum to show the miles he will have to drive. For your final answer, show the total mileage by the shortest route.