

Name _____ Date _____

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2012 Year 5 Optional SATs Test

Mathematics
Paper B

Calculator allowed. 45 minutes

1. Write the missing numbers in this sequence.

96

48

12

1 mark

2. There are 80 marbles in a bag.



3 children take 20 marbles each.
How many marbles are left in the bag?

1 mark

3. A train leaves at 11.10am. It takes 40 minutes to get to its destination.

Circle the time it arrives.



1 mark

4. Write what the missing numbers could be.

$$\boxed{} \times \boxed{} = 120$$

1 mark

5. Write in the missing numbers
One has been done for you.

Rounded to
the nearest
whole number is

	→	
7.07	→	7
9.57	→	
8.75	→	

1 mark

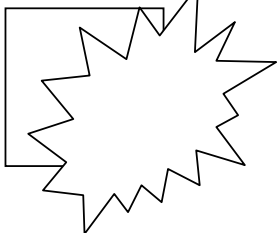
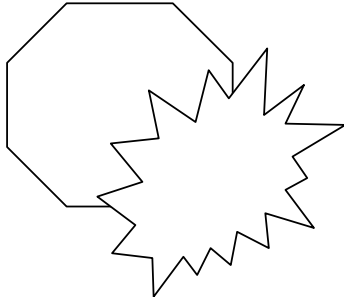
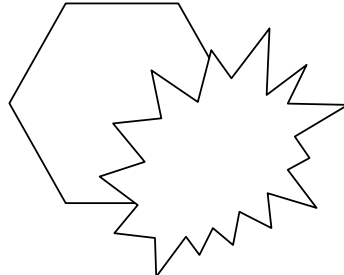
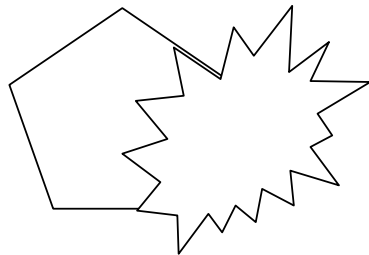
6. Here are some regular 2-D shapes.

A star hides part of each one.

Match each regular shape to its name.

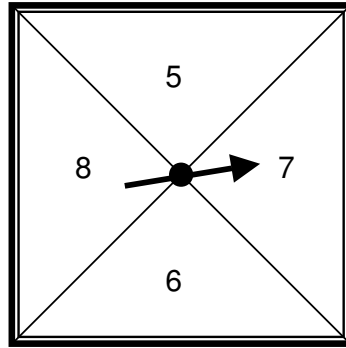
One has been done for you.

The image shows four regular polygons, each partially obscured by a star shape. From top to bottom, they are: a square, a pentagon, a hexagon, and an octagon. To the right of each polygon is a rectangular box containing its name. The 'square' box is already connected to the square polygon by a diagonal arrow. The other boxes are empty.

	hexagon
	pentagon
	square
	octagon

1 mark

7. Harry has this spinner.



What is his chance of spinning the numbers below?
Match each number to the correct word.
One has been done for you.

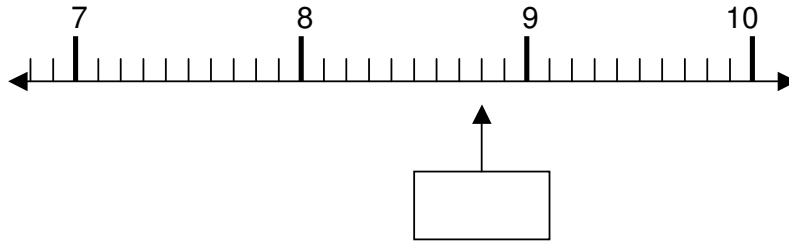
A number greater than 10		unlikely
8	→	even chance
6 or more		impossible
		likely

1 mark

8. $140 \div \square = 7$

1 mark

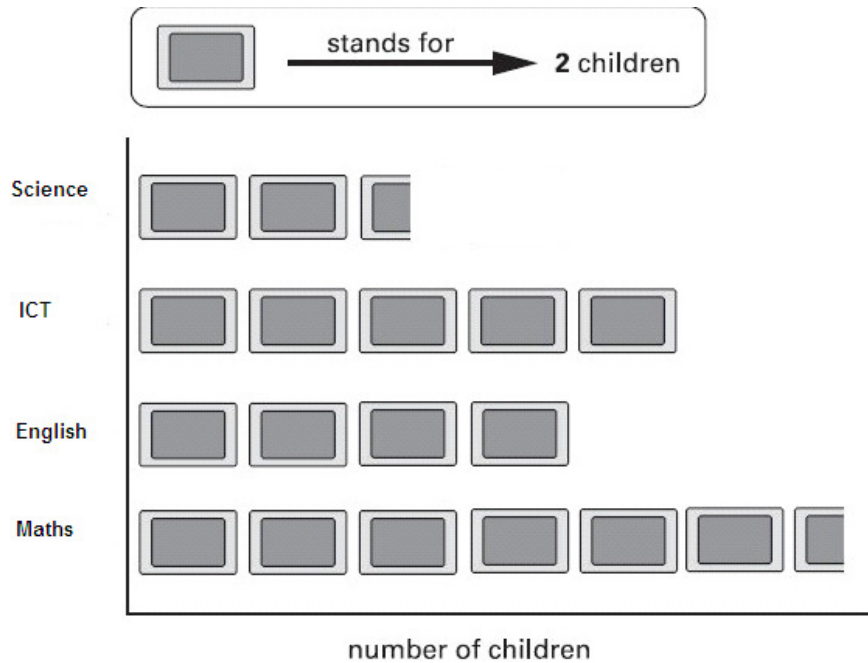
9. Here is part of number line. Write the missing number in the box.



1 mark

10. Jamal asked his class,
'What is your favourite subject?'

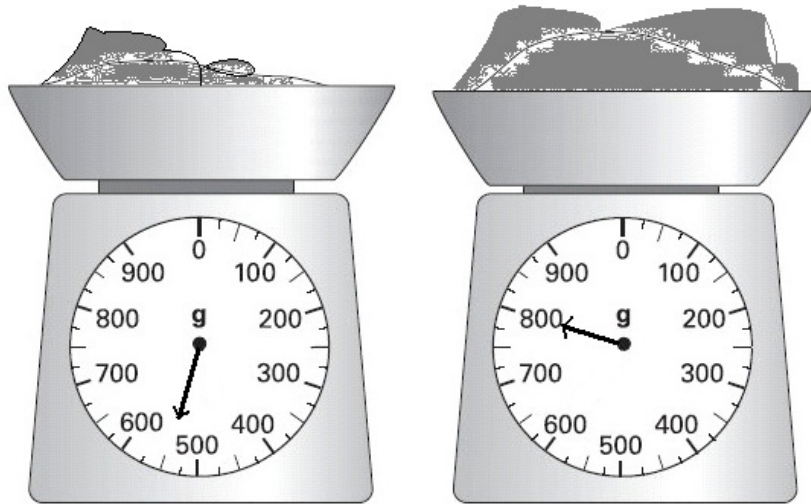
Here are his results.



How many more children prefer ICT than science?

1 mark

11. Clay is being weighed on these scales. How much heavier is the clay in the second scales?



Show your **method** and you may get a mark.

g

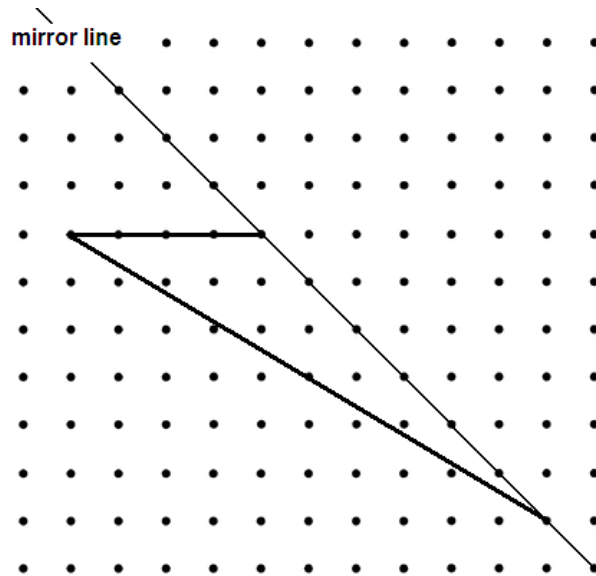
2 marks

12. Write what the missing numbers could be.

$$140 = (\quad - \quad) + 100$$

1 mark

13. Draw the reflection of the shape in the mirror line.
Use a ruler.



1 mark

14. Here are four digit cards.

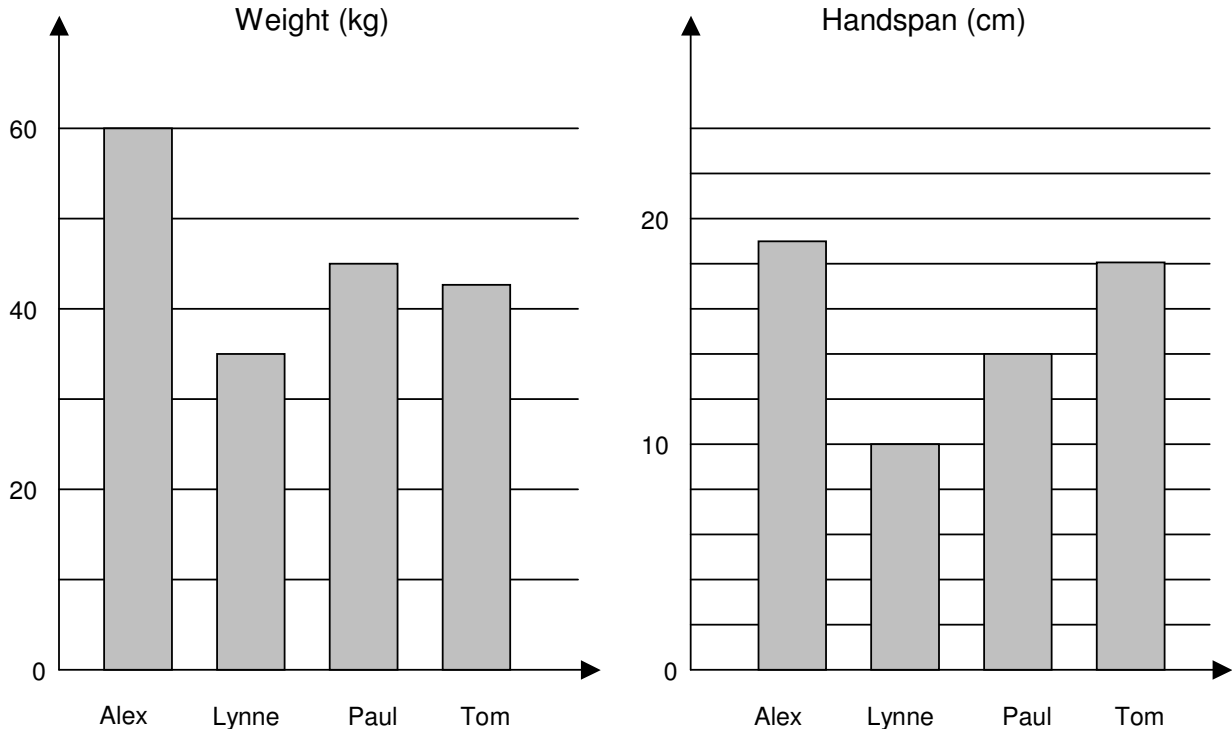


Write in three of the digits to make the total nearest to 500.

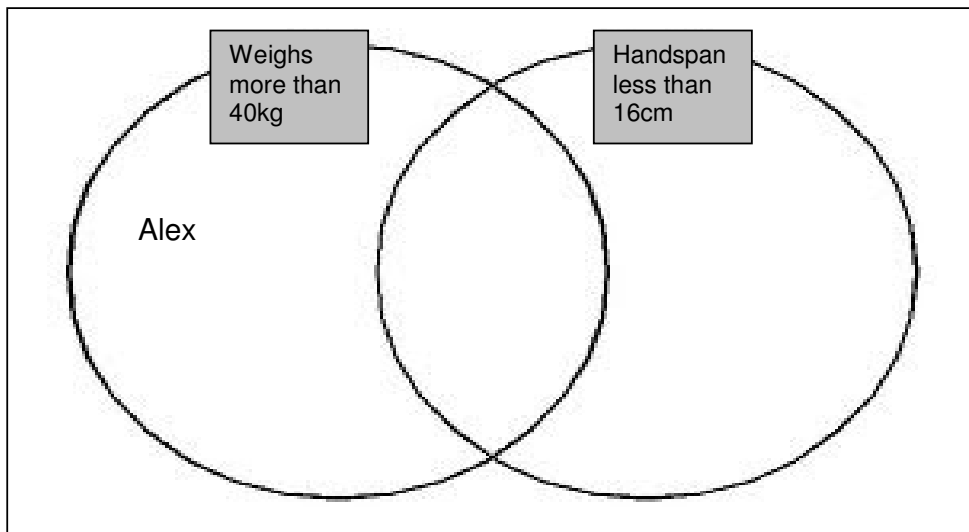
$$250 + \begin{array}{|c|c|c|} \hline & & \\ \hline \end{array}$$

1 mark

15. These graphs show data about Alex, Lynne, Paul and Tom.



Use this data to write each person's name in the correct region on the Venn diagram.
 One has been done for you.



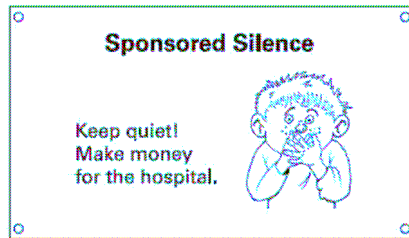
2 marks

16. The population of a town is more than 7500, but less than 9800.
Tick (✓) the amounts it could be.

- 7569
- 8900
- 9900
- 9810

1 mark

17. Two children take part in a sponsored silence.



I kept quiet from 11.20 until 11.25 in the morning. I got £4.52 a minute.



I kept quiet for quarter of an hour. I got £2.35 a minute.

How much money did each child get?

Laura

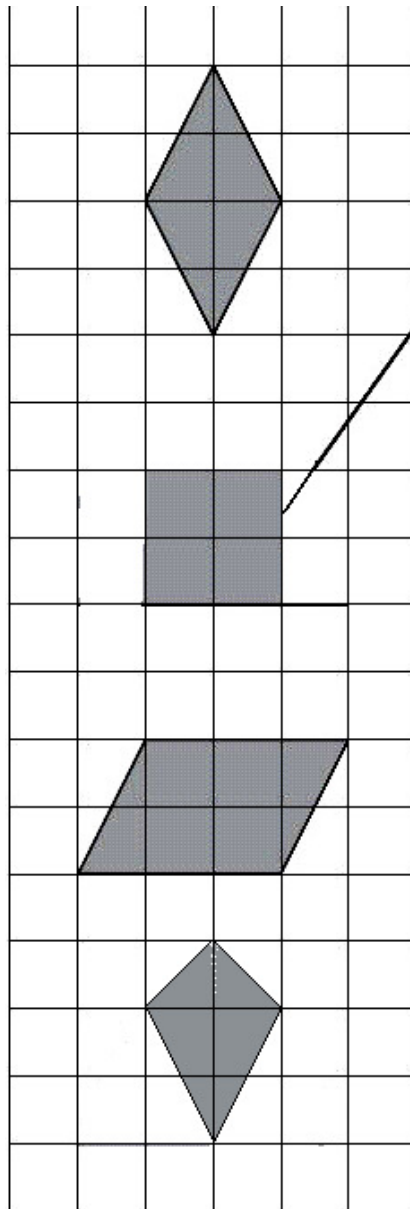
£

Carl

£

2 marks

18. Match each quadrilateral to the correct description.
One has been done for you.



Equal length sides and every angle is a right angle.

No parallel sides.

Opposite sides are parallel. No right angles.

Two pairs of parallel sides. Sides not all the same length.

1 mark

19. Here is a number grid. The shaded numbers are part of a sequence.

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	32	33	34	35

Explain the rule for the sequence.

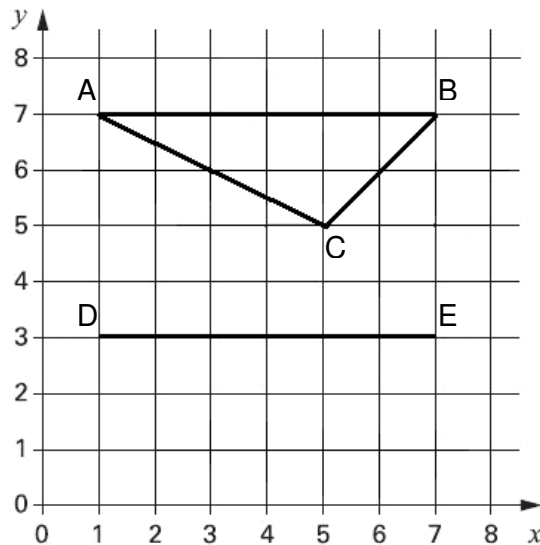
.....

.....

.....

1 mark

20. Patrick has drawn triangle ABC on this grid.



Jordan has started to draw an identical triangle DEF. What will be the coordinates of point F?

(,)

1 mark

21.




**306 children and 33 adults from Hill School go on a coach trip.
How many 57-seat coaches does the school need to hire?**

Show your working and you may get a mark.

2 marks

22. Circle one amount each time to make these sentences correct.

	<p>Big Ben's height is approximately:</p>	100cm
		100m
		100km

	<p>A mug is likely to contain:</p>	3ml
		300ml
		3000ml

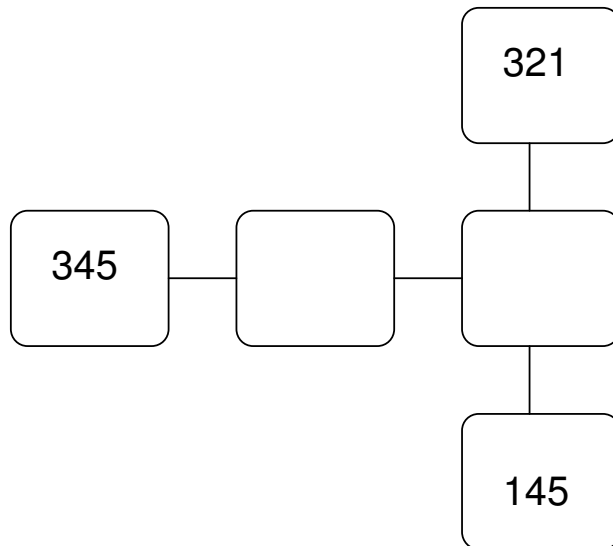
1 mark

23. Jack, Jacob and Nathan collect picture cards.
Cards are worth either 50 points or 100 points.
The table shows the cards they have.

	50 points	100 points	Total number of points
Jack	4	3	500
Jacob	7	<input type="text"/>	650
Nathan	3	4	<input type="text"/>

1 mark

24. The three numbers on each line add up to 674.
Write in the missing numbers.

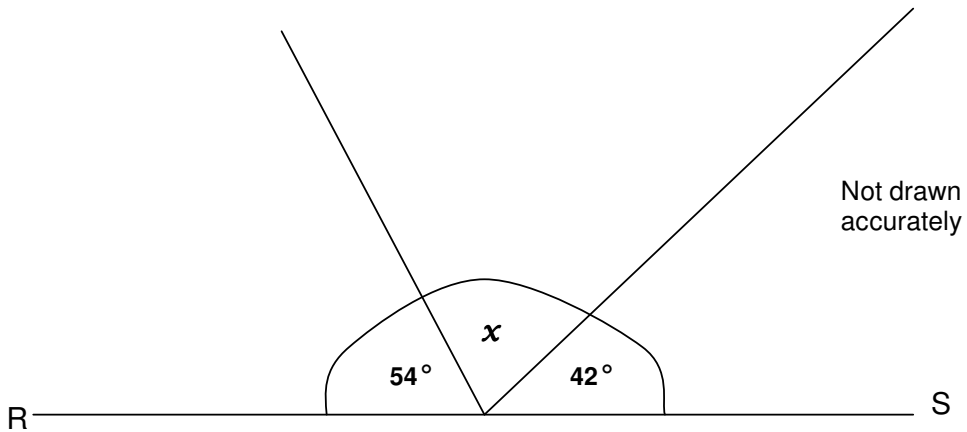


1 mark

25. $\frac{1}{5}$ of 435 =

1 mark

26. RS is a straight line.



Calculate the size of angle x .

Do not use a protractor (angle measurer).

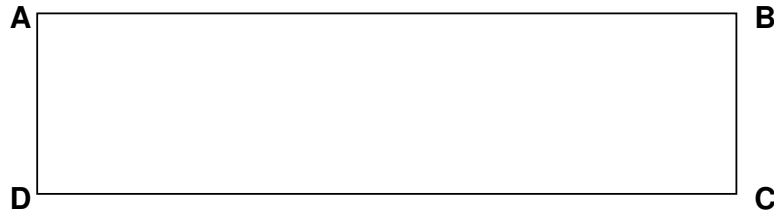
1 mark

27. Circle the two fractions which are equivalent to 0.8

$\frac{1}{8}$ $\frac{8}{10}$ $\frac{80}{100}$ $\frac{1}{80}$

1 mark

28. Rectangle **ABCD** has a perimeter of 40 centimetres.
Sides AB and DC are 3 times as long as sides AD and BC.



Not actual size

- Calculate the length of side **AD**.
Do not use a ruler.

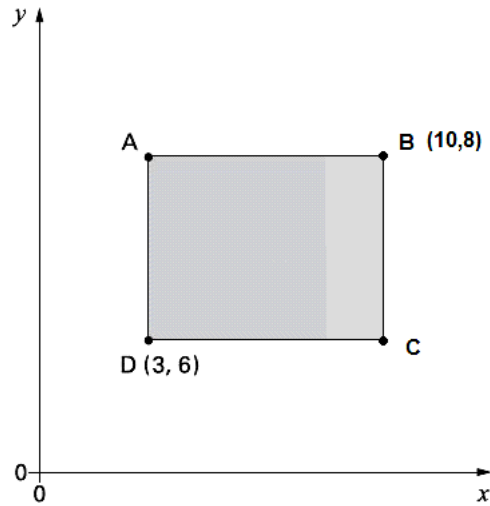
1 mark

29. Write in the missing number

$$\boxed{2} \times \boxed{} = \boxed{12} \times \boxed{12.5}$$

1 mark

30. Here is a shaded square.



Write the coordinates for point C.

C = (,)

1 mark

31. Here are the ingredients for flapjacks.

<u>Flapjacks</u>
120g butter
100g sugar
4 tablespoons syrup
250g oats

Martha makes flapjacks using 1000g of oats.

What weight of butter should she use?

1 mark