Year 8 Level 6 Maths Practice Assessment

Name: | **Class:** | **Date:**

A Number and the number system

1. (a) A bag has **20** cubes in it. **6** of the cubes are green.
You take one cube out of the bag at random.
Which values below show the **probability** that you take out a cube that is green?
Circle the correct **four** values.

$\frac{6}{14}$	30%	0.6	3/10
6%	3/5	6/20	0.03
0.3	6/10	60%	$\frac{6}{26}$

2marks (L6/1)

(b) Write these numbers in order of size, starting with the smallest:

0.32 $\frac{1}{3}$ 33% $\frac{3}{10}$

---------- 1 mark (L6/1)

B Calculating

2. In 2008 a company sold 1200 computers.
In 2009 the sales increased by 20%
Work out how many computers were sold in 2009.

---------- 2 marks (L6/2)

3. Potting compost is made of loam, peat and sand in the ratio of 7 : 3 : 2

If the gardener used 1.5litres of peat, how much compost did he produce?

----------2 marks (L6/3)

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4. Which is the best buy?

6 pens for £2.30

OR

5 pens for £1.90

.....2 marks (L6/4)

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5. Work out:

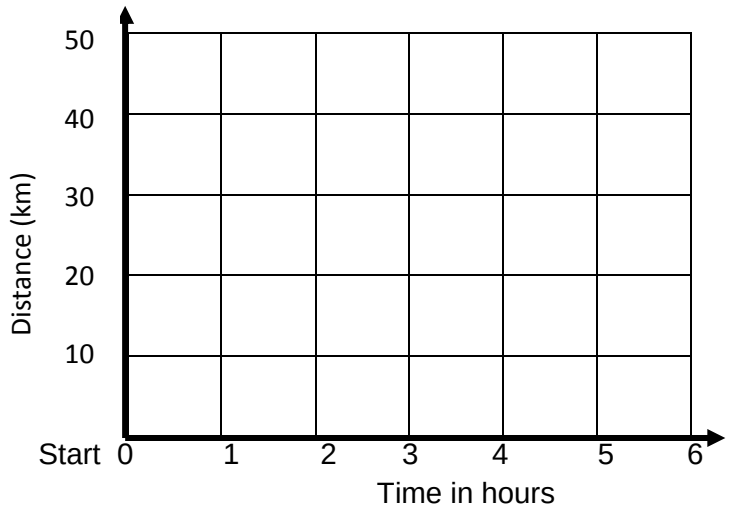
$$\frac{7}{9} \text{ of } 3\text{km}$$

Give your answer as a fraction

----------2 mark s(L6/5)

1 mark(L6/9)

6.



Plot the journey as described:

- Start 10km from the start
- Travel 40km/h away from the start for 1 hour
- Rest for 1 hour
- Travel 20km towards the start in the next 4 hours.

2 marks (L6/10)

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7. Max drew this sketch to show what happened to the volume of water in his bath.

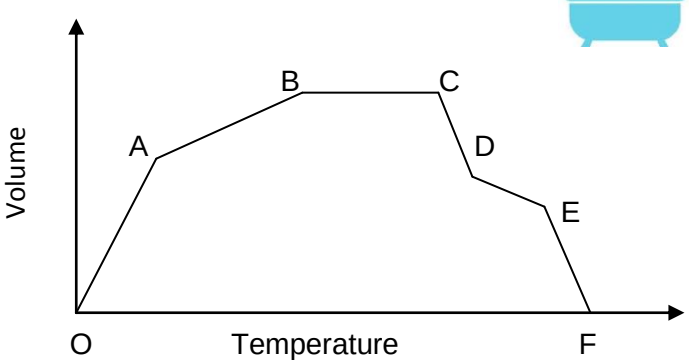
(a) Both taps were on at O

What happened at A?

(b) What happened at B?

(c) What happened at C?

(d) What happened between D and E?



(a) At A .....

(b) At B .....

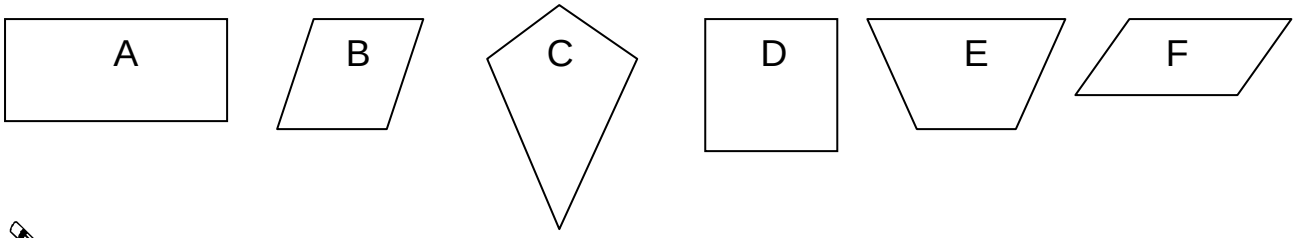
(c) At C .....

(d) Between D and E .....

2 marks (L6/11)

D **Shape, Space and Measure**

8. Look at the quadrilaterals and write the letter of each shape in the correct position



	No line symmetry	Line symmetry order 1	Line symmetry order 2	Line symmetry order 4
No rotational symmetry				
Rotational symmetry order 2				
Rotational symmetry order 4				

3marks (L6/12)

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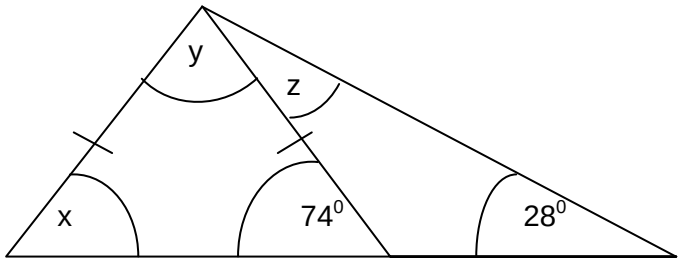
9. Find the missing angles. You must give a reason.



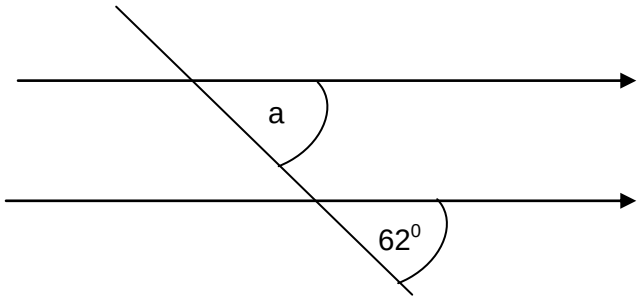
x= ..... Reason .....

y= ..... Reason .....

z= ..... Reason .....

3marks (L6/13)

10.

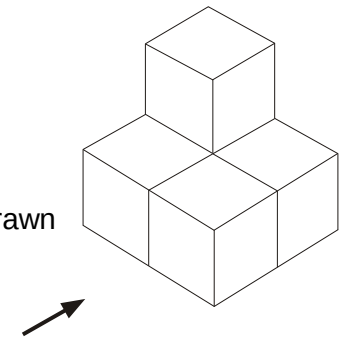


1marks(L6/14)

a= .....Reason .....

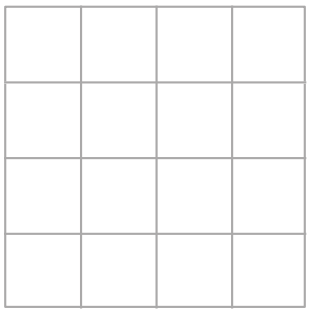
11. The diagram shows a sketch of a solid object.
The solid object is made from five centimetre cubes.

Diagram **NOT** accurately drawn



(a) On the grid of centimetre squares, draw the elevation of the solid object in the direction marked with an arrow.

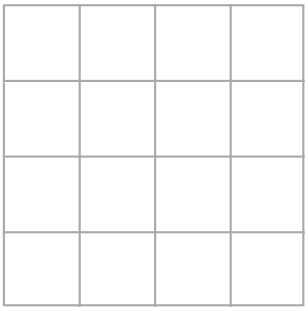
Front Elevation



1 mark (L6/16)

(b) On the grid of centimetre squares, draw the plan of the solid object

Plan



1 mark (L6/16)

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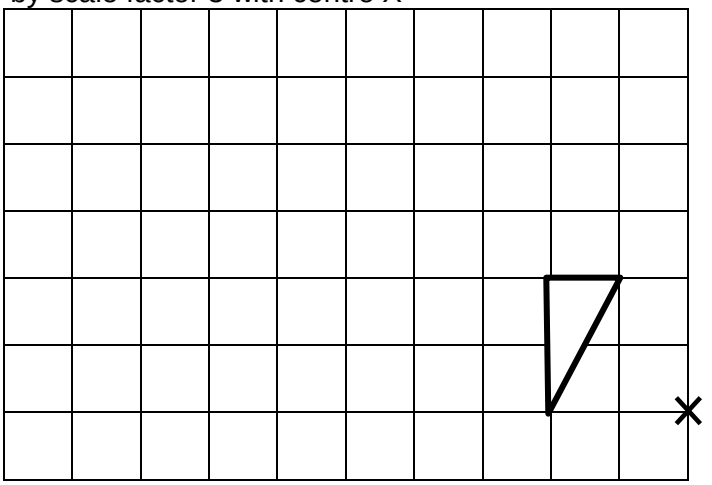
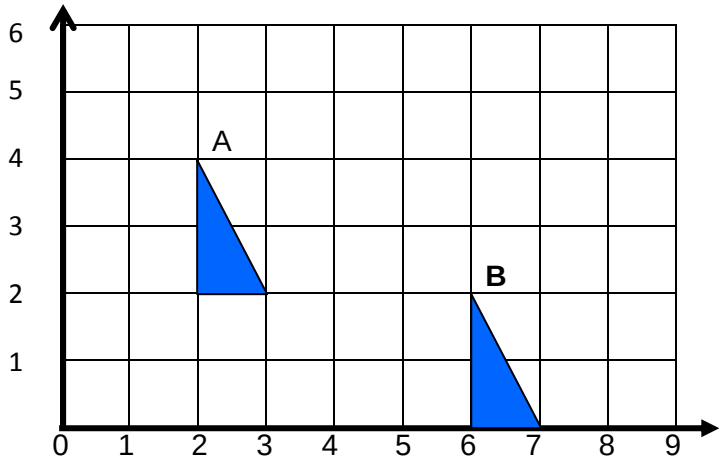
12. Enlarge this shape by scale factor 3 with centre X



1mark (L6/17)

13. Describe fully the transformation that maps A onto B



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1mark(L6/18)

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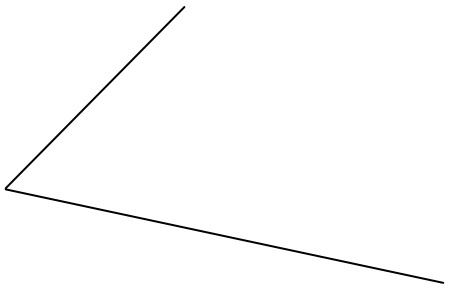
14. Construct the angle bisector of the angle here:



1 mark(L6/19)

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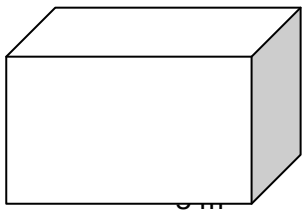
15. Work out the surface area of this cuboid



2m

.....2 marks (L6/20)

16. Work out the length of the circumference of this table top.
It has a diameter of 84cm
Give your answer **<u>correct to the nearest whole cm</u>**.

.....2 marks (L6/21)

E **Data Handling**

17.

6	21	18	4	23	6
4	11	30	23	14	28
12	18	25	16	14	26
1	23	11	24	3	22
2	9	2	19	17	25

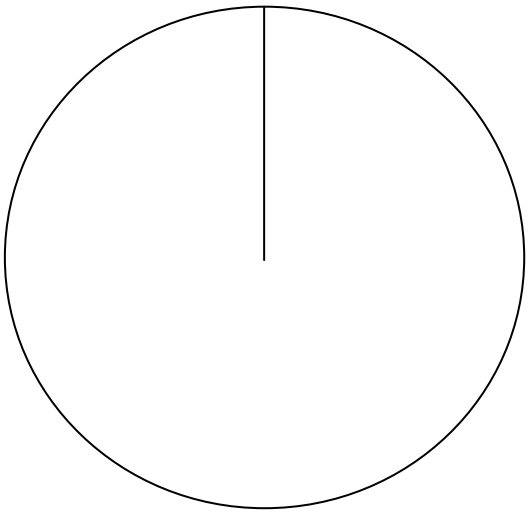
Choose suitable class intervals to draw up a frequency table for the above scores

Class intervals	Tally	Frequency

2 marks (L6/22)

18. Construct a pie chart for the data
(Favourite takeaway)

Flavour	Number	Angle
Indian	10	
Fish & chips	3	
Chinese	7	
Pizza	20	



2 marks (L6/23)

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1 mark (L6/24)

The computer is programmed so the chance it loses is 0.3 and the chance it draws is 0.5.

What is the probability that it wins?

.....1 mark (L6/25)

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19. Zoe recorded the weight of each of 15 people.
She showed her results in a stem and leaf diagram.

4	6 8
5	1 2 8
6	0 3 4 6 8
7	4 7 8 9
8	7

Key:

4|6 means 46 kg

(a) Write down the number of people with a weight of more than 70 kg.

..... 1 mark (L6/26)

(b) Work out the range of the weights.

..... kg

1 mark (L6/26)