FFX 3-4 Maths Revision Material

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

A **Number and the number system**

1. (a) Complete the table of equivalents:

Percentage	Fraction	Decimal
	$\dfrac{3}{20}$	
40%		
		0.07

2marks (L6/1)

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

$$0.63 \quad \frac{5}{8} \quad 62\% \quad \frac{3}{5}$$

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

B **Calculating**

2. The normal price of a kettle is £56.
In the sale it is 25% off

Calculate the sale price of the kettle.

£ .... 2 marks(L6/2)

3. The ratio of the number of boys to girls in a class is 3 : 5.

There are 9 boys

How many girls are there in the class?

.... girls

1 mark (L6/3)

4. Here is a list of the ingredients to make leek soup for 6 people.

Ingredients for 6 people

600g of leeks
30g of butter
3 tablespoons of wholemeal flour
450ml of milk
60ml of water

(a) Work out the amount of leeks needed to make leek soup for 4 people

-------------------------- 1mark (L6/4)

(b) Work out the amount of milk needed to make leek soup for 4 people

------------------------1mark (L6/4)

5. Work out:

$$\frac{3}{4} - \frac{2}{5}$$

.------------------------.2 marks (L6/5)

C **Algebra**
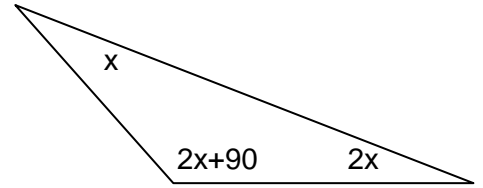
6. The equation: $x^2 - 2x = 40$

has a solution between 7 and 8
Use a trial and improvement method to find this solution. Give your answer correct to 1dp
You **must** show all your working.

x = ...…................. 2 marks (L6/6)

7. All angles are measured in degrees.

(a) Write down an expression in terms of x, for the sum of the angles of this triangle.

............................1 mark (L6/7)

The sum of the angles of a triangle is 180^0

(b) By forming an equation work out the value of x

$x =$........................ 2 marks (L6/7)

8. Here are the first 5 terms of an arithmetic sequence.

$$8, \quad 10, \quad 12, \quad 15, \quad 19$$

Find an expression, in terms of n, for the nth term of the sequence.

....

2 marks (L6/8)

9(a) Complete the table of values for $y = 3x + 1$

x	−2	−1	0	1	2	3
y	-5		1	4		10

1 mark (L6/9)

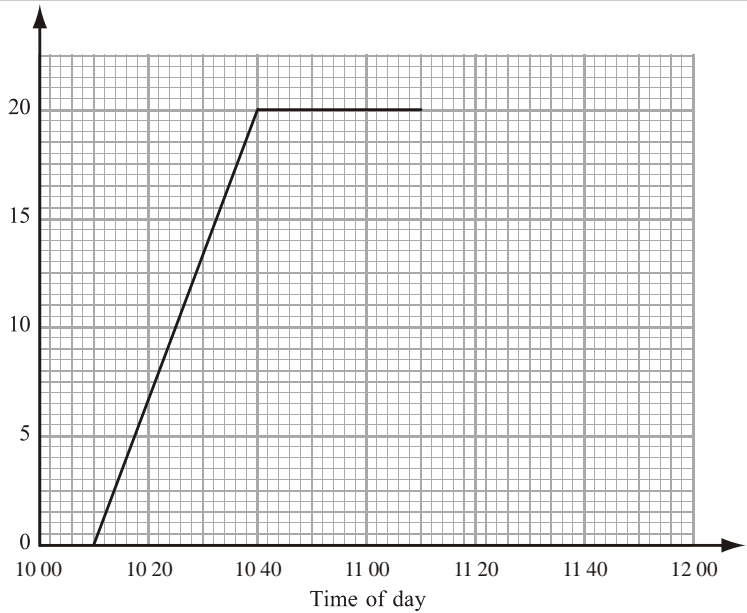On the grid, draw the graph of $y = 3x + 1$, for values of x from −2 to 3
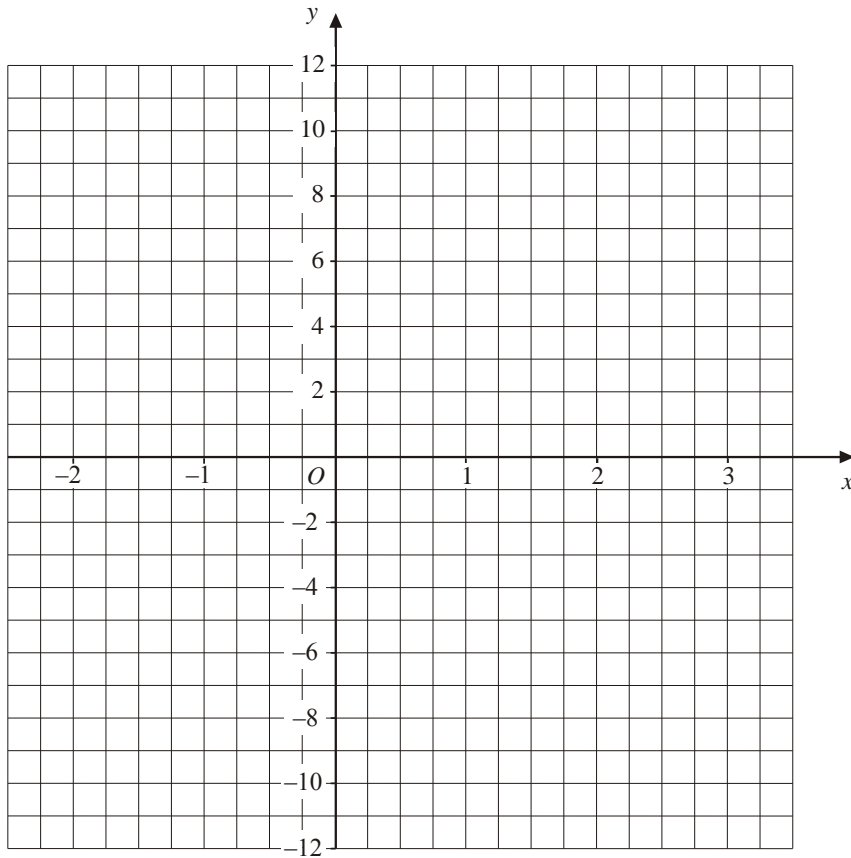
10. Jamie travelled 20 km from his home to his friend's house.

Jamie then spent some time at his friend's house before returning home.

Here is the travel graph for part of Jamie's journey.

a) Write down the time that Jamie left home.

………………... 1marks (L6/10)
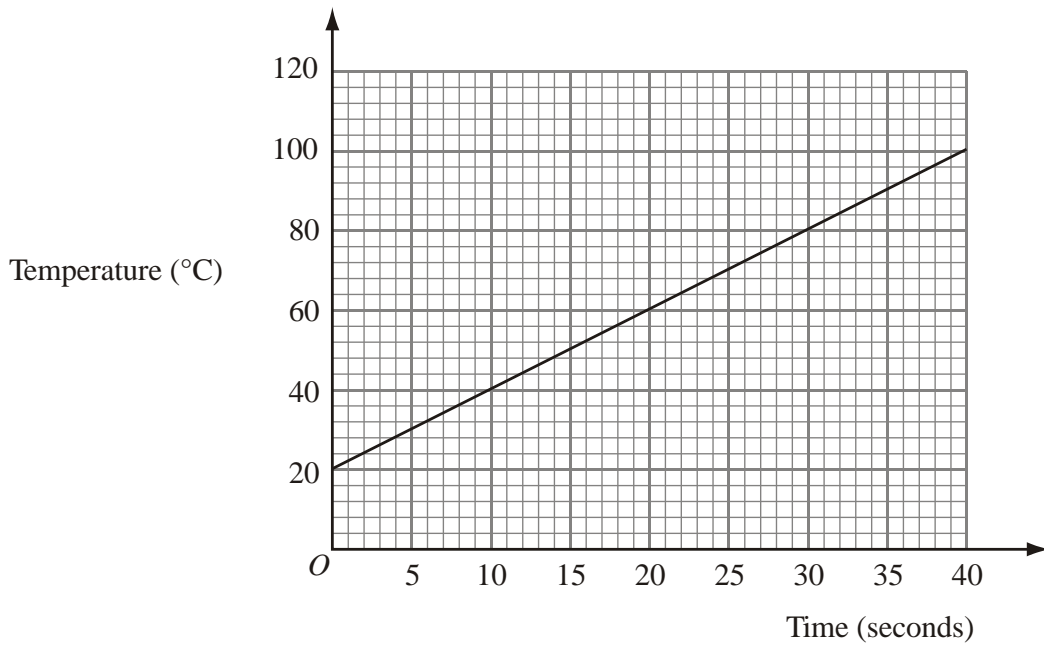
b) Write down Jamie's distance from home at 10 20

…………………….. km 1 marks (L6/10)

Jamie left his friend's house at 11 10 to return home.

c) Work out the time in minutes Jamie spent at his friend's house.

…………………. minutes 1 marks (L6/10)

11.   Joe heats some water in a kettle.
      The graph gives information about the temperature of the water in the kettle and the length of time it has been heated.

a) Write down the temperature of the water when Joe started to heat the water.

.... °C   1 mark (L6/11)

b) Use the graph to find how many seconds it took the water to reach a temperature of 70°C.

.... seconds   1 mark (L6/11)

D   Shape, Space and Measure

12. Name each of the quadrilaterals: **NAME**

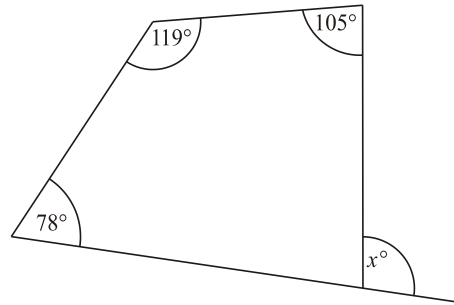a) This quadrilateral has exactly ONE pair of parallel sides ⟶   - - - - - - - - - - - - - -

b)

        ⟶   - - - - - - - - - - - - - -

c) This quadrilateral has 4 equal sides and 4 angles 90⁰   ⟶   - - - - - - - - - - - - - -

d)

        ⟶   - - - - - - - - - - - - - -

2 marks (L6/12)

13. Work out the value of *x.*

119°   105°

78°

x°

$x =$ ………………...

2 marks (L6/13)

14.

A

P ———————————— Q
        x
        B
    50°

R ———————————— S
        y
    C

D

(a) (i) Write down the size of the angle marked *x*.

...............................°

(ii) Give a reason for your answer.

.... 1mark(L6/14)

(b) (i) Write down the size of the angle marked *y*.

.... °

(ii) Give a reason for your answer.

....1mark(L6/14)

15. Kay types the instructions to draw a regular pentagon:

repeat 5 [forward 10, left turn 72]

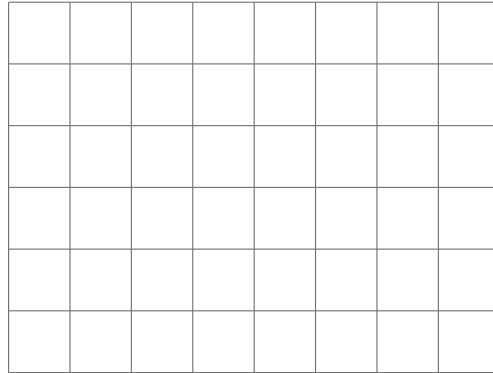Complete the instructions to draw an octagon.

Repeat 8 [forward 10, left turn ....]

1mark (L6/15)

16. Here are the plan and front elevation of a solid shape.

Plan

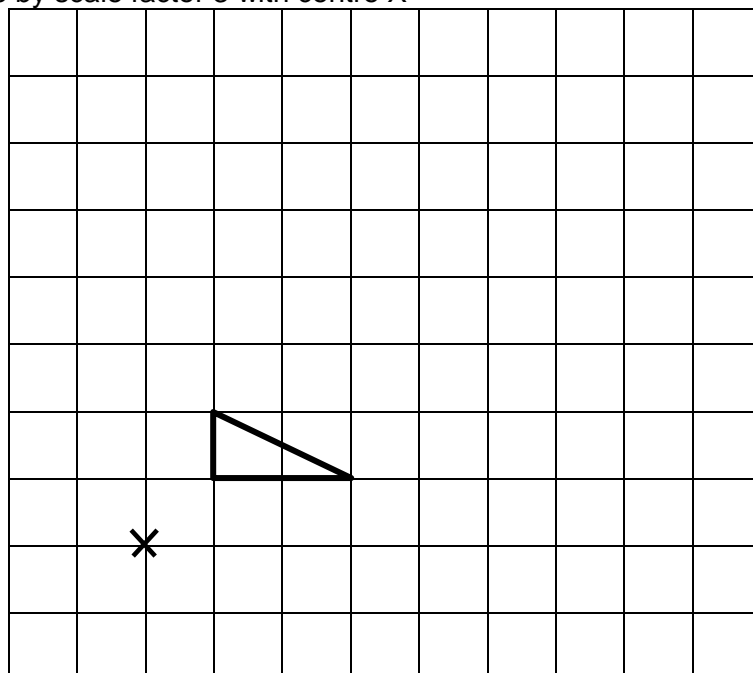Front Elevation
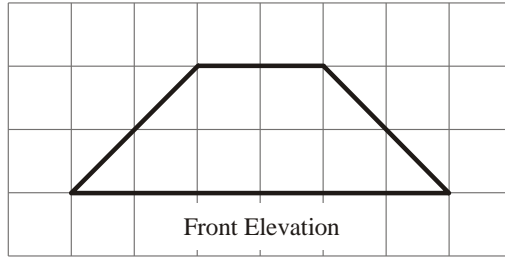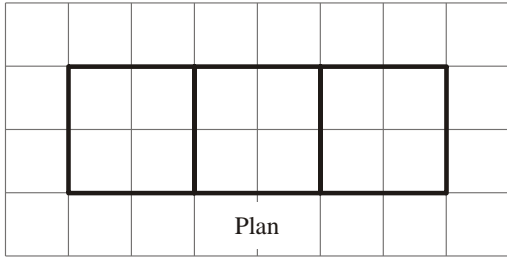
(a) On the grid below, draw the side elevation of the solid shape.
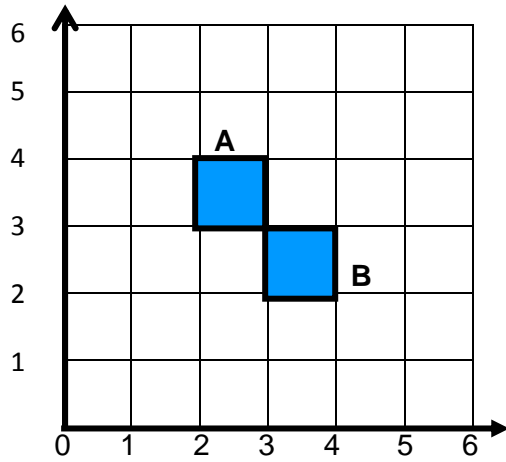
a) In the space below, draw a sketch of the solid shape.

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

18.   Describe TWO different transformations that would map A onto B

Transformation 1..

Transformation 2..
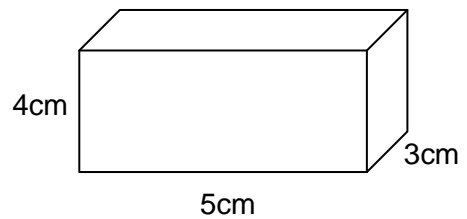
19.   Use a pair of compasses to construct an equilateral triangle of side 4cm

20. Work out the total surface area of this cuboid
   Do not forget the units.

4cm

3cm

5cm
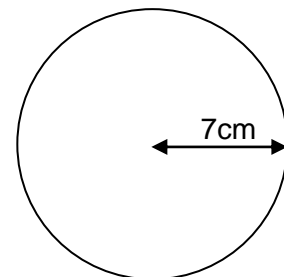
....2 marks (L6/20)

21.   Work out the area of this circle
       It has a radius of 7cm
       Give your answer **correct to 1dp.**

7cm

....2 marks (L6/21)

E **Data Handling**

22. 80 children went on a school trip.
They went to London or to York.

    23 boys and 19 girls went to London.
    14 boys went to York.

    Use this information to complete the two-way table.

	London	York	Total
Boys			
Girls			
Total			

2 marks (L6/22)

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23. Jan measures the heights, in millimetres, of 20 plants in her greenhouse.
Here are her results.

178	189	147	147	166
167	153	171	164	158
189	166	165	155	152
147	158	148	151	172

Complete the stem and leaf diagram to show this information.

2 marks (L6/23)

Stem	Leaf

Key:

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24. 3 normal coins are tossed.
List all the possible outcomes

One outcome is done for you

1st coin	2nd coin	3rd coin
Head	Head	Head

1 mark (L6/24)

25. Four athletes are taking part in a race.

The table shows the probabilities that Alan, Barbara and Carl will win the race.
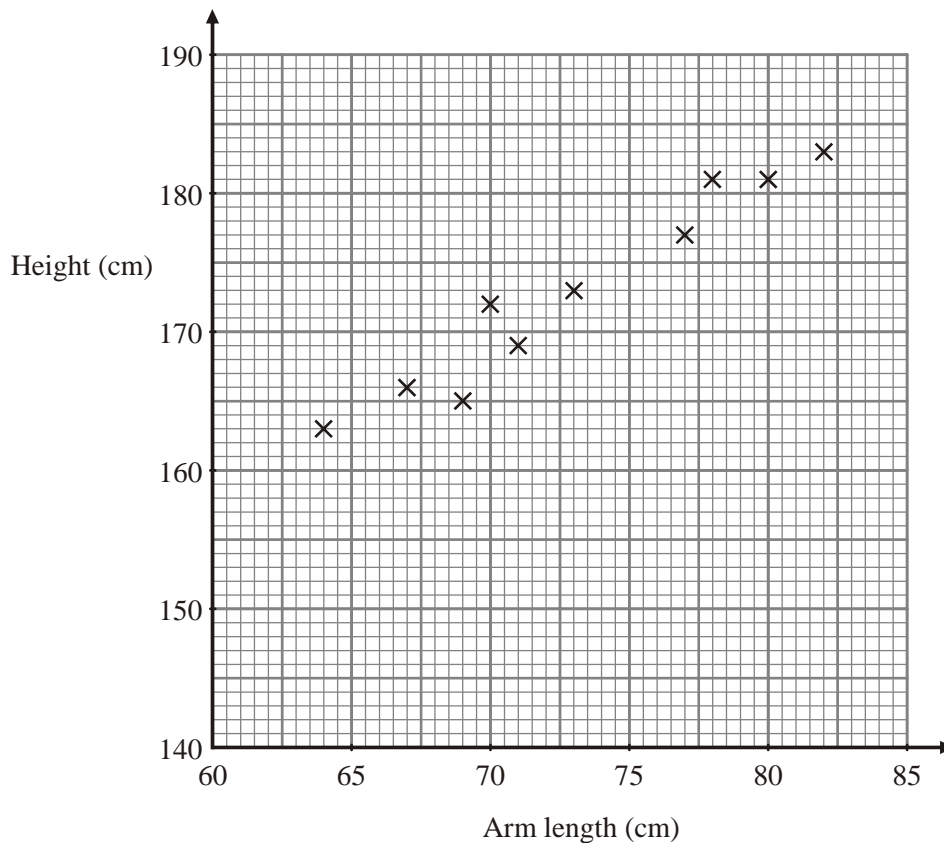
Athlete	Alan	Barbara	Carl	Diana
Probability	0.2	0.14	0.3	

Work out the probability that the Diana will win the race.

.... 1 mark (L6/25

26. The scatter graph shows some information about 10 students.
It shows the arm length and the height of each student.

Arm length (cm)

(a) What type of correlation does this scatter graph show?

....

Another student has an arm length of 75 cm.

(b) Use your line of best fit to estimate the height of this student.

.... cm

2 marks(L6/26)