FFX 4/5 Maths Revision

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

A <u>**Number and the number system**</u>

1.
Fill in the boxes below to give the correct answers.

$0.1 \times \boxed{} = 40$

$\boxed{} \div 0.4 = 10$

2. Work out an **<u>estimate</u>** for the value of

$$\frac{75.1 \times 8.3}{63.2 + 3.52}$$

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3. Work out:
Use your calculator to work out the value of $\dfrac{3.54^2}{6.2 \times 1.5}$

Write down all the figures on your calculator display.

C <u>**Algebra**</u>

4. Expand & simplify :

$(x - 7)(x + 1)$

$x = $ ....

5. Solve these simultaneous equations by an algebraic method:
   Show all working out

$$3x + 2y = 12$$
$$4x - y = 5$$

x = ...
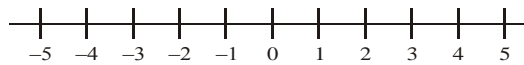
y = ...

2 marks (L7/7)

6. (i) Solve the inequality

$$2(x + 3) > 4$$

..........................2 marks (L7/8)

   (ii)   On the number line, represent the solution set to part (i).

1 mark (L7/8)

7. $F = \dfrac{3(a + b)}{4}$

   Find F when a = 4 and b = -12

F = ... 1 mark (L7/9)

8. Find the nth term of each of these sequences:
                     -3, 0, 5, 12, 21, …

T(n) = _____2 marks (L7/10)

9. The weight of a bag of potatoes is 25 kg, correct to the nearest kg.

   (a) Write down the smallest possible weight of the bag of potatoes.

   .... kg

   (b) Write down the largest possible weight of the bag of potatoes.

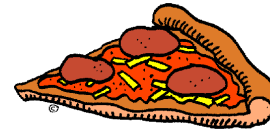   .... kg

   2 marks (L7/16)

E   Data Handling

10. A student wanted to find out how many pizzas adults ate.
    He used this question on a questionnaire.
    'How many pizzas have you eaten?'

    A few   A lot

    (a) Write down **two** things that are wrong with this question.

    ....

    .... 2marks (L7/18)

He gave his questionnaire to 10 of his teachers.

   (b) Give **two** reasons why this is not a good way to find out how many pizzas adults ate.

   1st Reason..

   ....

   2nd Reason...

   ....

   2 marks (L7/18)

11. Josh asked 30 students how many minutes they each took to get to school.
    The table shows some information about his results.

Time taken (t minutes)	Frequency		
$0 < t \le 10$	6		
$10 < t \le 20$	11		
$20 < t \le 30$	8		
$30 < t \le 40$	5		

   Work out:

   a) The modal class

   .... 1mark(L7/20)

   b) an estimate for the mean number of minutes taken by the 30 students.
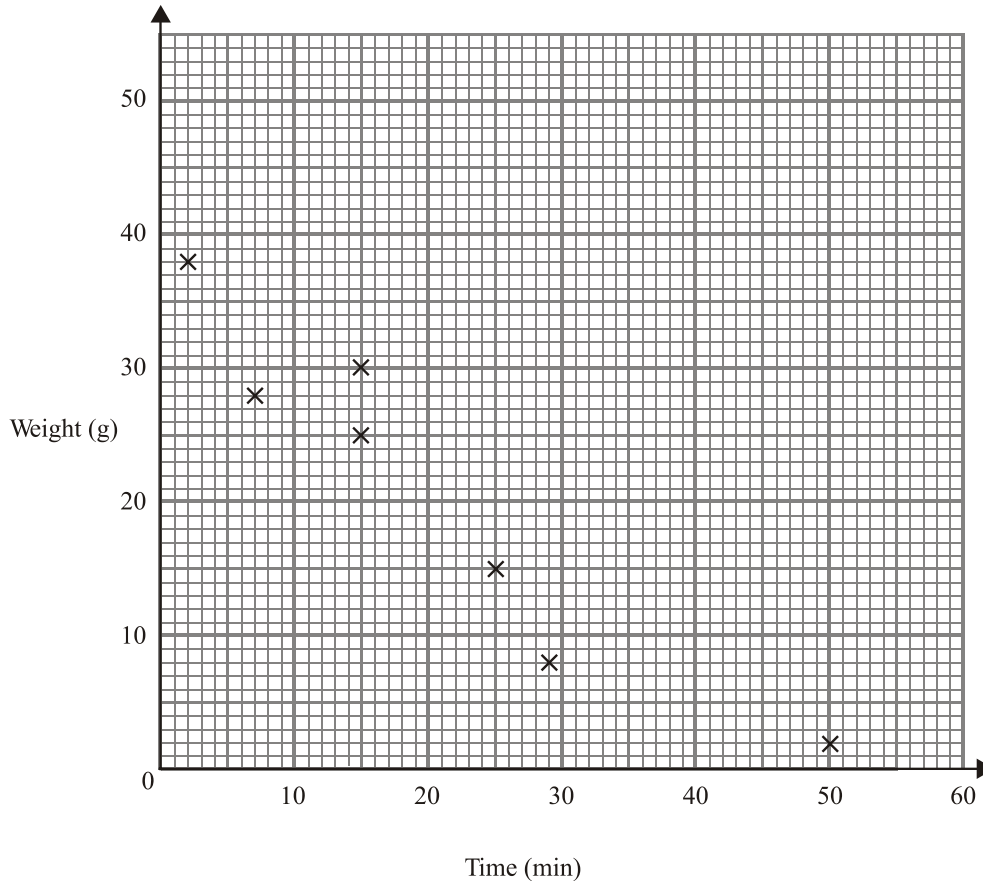
   .... seconds

   2marks(L7/20)

12. The table shows the number of minutes each of ten candles burnt before it went out and the weight left of each candle when it went out.

Time (min)	29	15	25	50	2	15	7	30	35	35
Weight (g)	8	25	15	2	38	30	28	20	15	12

(a) Complete the scatter graph. **The first 7 points** have been plotted for you.　　1mark(L7/19)

Time (min)

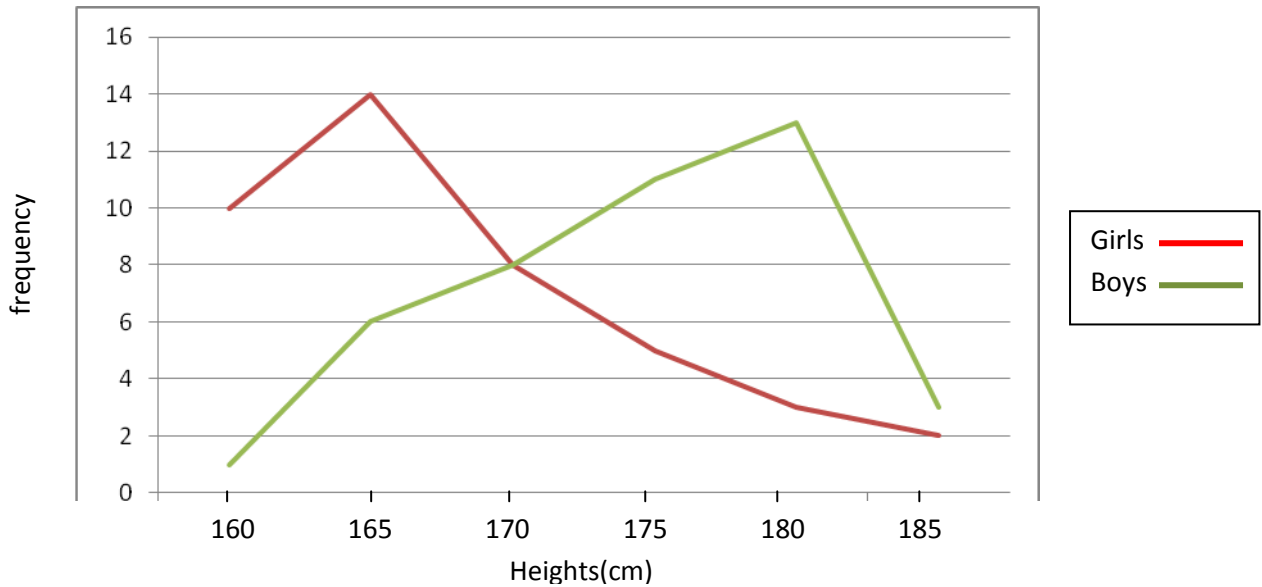Describe the **correlation** between the time and the weight.

………………………………. 1mark(L7/19)

(c) A candle had a weight of 10 g when it went out.

Use a line of best fit to estimate the number of minutes this candle burnt before it went out.

…………………………… min

13. These two frequency polygons show the heights of a group of girls and a group of boys.
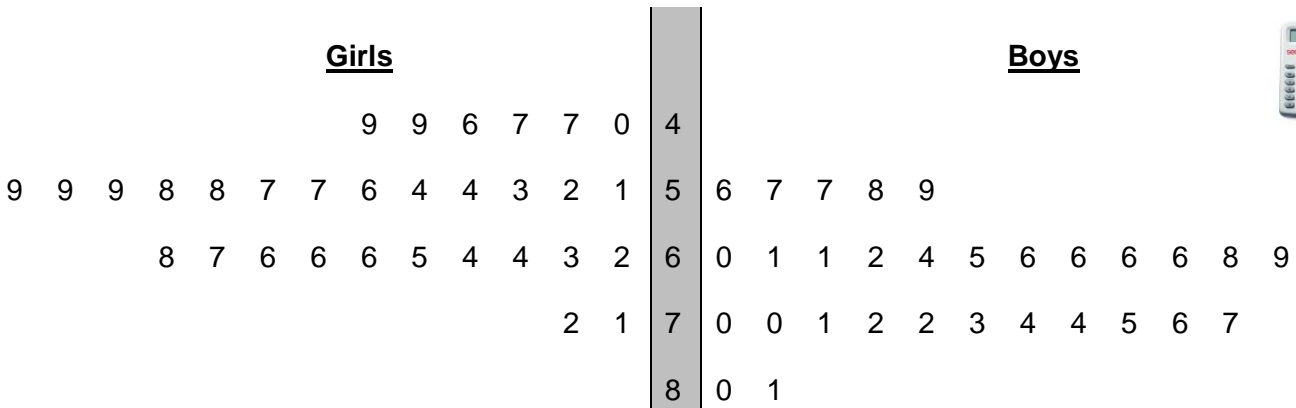

Compare the heights of the two groups. Give a reason for your answers

....

....

14. The back to back stem and leaf diagram shows the weights of 30 girls and 30 boys in Year 10

							Girls								Boys											

Girls   **Boys**

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

KEY: 5 | 1 means 51kg

Compare the weights of the girls and boys by finding:

(a) The range

Girls' range ....

Boys' range ....

1mark (L7/21)

(b) the median of each distribution

Girls' median ....

Boys' median ....

1mark (L7/21)

(c)Use your calculations to compare the weights of boys with the weights of the girls:

....

....1mark (L7/21)