FFX 5/6 Maths Revision

Name:		Class:		Date:	

A   **Number and the number system**

1.   (a)   Write $\frac{7}{15}$ as an exact decimal

....1 mark (L8/1)

(b) Write 0.1212121212.................. as a fraction

....1 mark (L8/1)

B   **Calculating**

2. (a) (i) Express 0.000043 in standard form

.... 1 mark (L8/3)

(ii) Express 7×10^4 as an ordinary number

.... 1 mark (L8/3)

(b) Work out $3.25 \times 10^5 \times 2.4 \times 10^{-1}$
Give your answer in standard form

.... 1 mark (L8/3)

C   **Algebra**

3.   Factorise the following expressions:
(a) $x^2 - x - 12$

------------------------- 1mark (L8/4)

(b) $x^2 - 49$

------------------------- 1mark (L8/4)

4. Expand the following :
    (a) $(3x - 2)(3x - 1)$

    ....1 mark (L8/5)

    (b) $(x - y)^2$

    ....1 mark (L8/5)

5. Make a the subject of this formula:

    Show each stage of your working out

    $ma^2 = F$

    a = ... 1 mark (L8/6)

6. Find the value of $S = \dfrac{u^2 + v^2}{2a}$ when u = -1, v = -2 and a = 2

    b = ... 1 mark (L8/7)

E   **Data Handling**

7. The table shows the medians and interquartile ranges of a group of students exam results

	Median	Interquartile range
Maths Exam	49	32
English Exam	54	21

Comment on the results

.... 1 mark (L8/15)

8. (a) A bag contains red, white and blue balls.
A ball is taken from the bag at random.
The probability of taking a RED is 0.4.
The probability of taking a white is 0.35.
What is the probability of taking a white ball OR a blue ball?

.... 1mark (L8/16)

(b) The probability a car fails its MOT on brakes is $\dfrac{1}{5}$

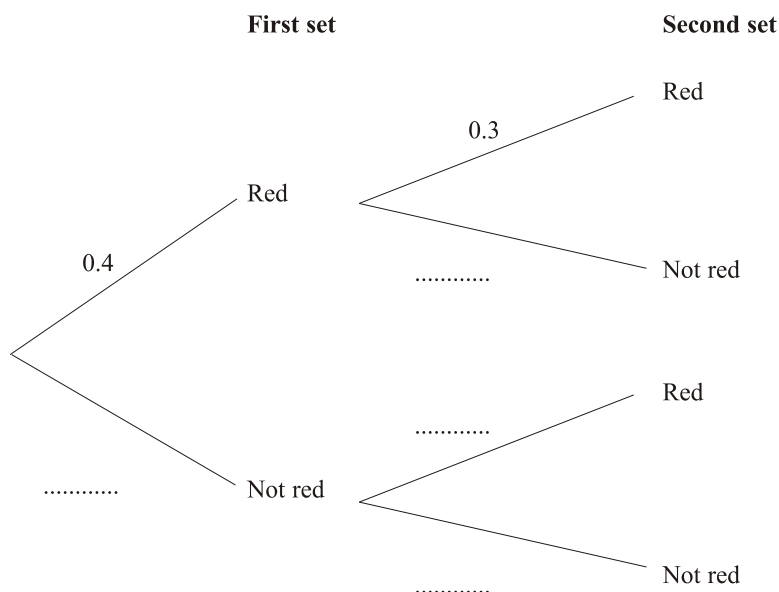The probability a car fails its MOT on lights is $\dfrac{1}{10}$.

What is the probability that the car fails its MOT on both brakes AND lights?

.... 1mark (L8/16)

9. There are two sets of traffic lights on Georgina's route to school.
The probability that the first set of traffic lights will be red is 0.4
The probability that the second set of traffic lights will be red is 0.3

(a) Complete the probability tree diagram.   2marks (L8/17)

(b) Work out the probability that both sets of traffic lights will be red.

.... 2marks (L8/17)