MATHS TEST 4° ESO _ 2012.

1st term resit exam. January

Name:……N°:……course:……..

1)

The lengths of 30 trout were measured to the nearest cm. The following data was obtained:

Length (cm)	30 - < 32	32 - < 34	34 - < 36	36 - < 38	38 - < 40	40 - < 42	42 - < 44
Frequency	1	1	3	7	11	5	2

a) Find the Quartiles

b) Find the standard deviation

2) We need to form a 6 a side team in a class of 14 students. How many different teams can be formed?

3) A bag contains 3 red, 4 green and 3 yellow marbles. Two of these marbles are randomly drawn from the bag. What is the probability that they are of

(i) the same colour

(ii) different colours(one of each colour)

4) 43% are wearing seatbelt and 57% are not wearing seatbelt. Randomly pick 2 people. What is probability that both will be wearing seatbelt

5) Find and simplify using only radical properties:

a) $\sqrt[7]{x\cdot\sqrt[3]{x}}=$

b) $\sqrt[3]{5}:\sqrt[4]{5}\cdot(\sqrt{5})^7=$

c) $\dfrac{\sqrt[5]{a^2}\cdot\sqrt{a^7}\cdot\sqrt[3]{a^4}}{\sqrt[4]{a^3}\cdot\sqrt[3]{a^{-4}}}=$

6) Express with integer denominator, (simplify your answer):

a) $\dfrac{3}{4\sqrt{3}-\sqrt{6}}$ b) $\dfrac{2\sqrt{2}-\sqrt{5}}{\sqrt{11}-3\sqrt{3}}$

7) Simplify: $4\sqrt{7}-8\sqrt{63}+12\sqrt{175}-2\sqrt{252}=$

8) Divide

$$(2x^4-x^3-2x^2+12x-9):(2x^2-3x+5)$$

9) Find "m" if we know that the remainder in the following division is 3

$$x^3+(2m-1)x^2-3x+(1-m)\ :\ (x+1)$$

1	2	3	4	5	6	7	8	9
2	0.5	1	1	1.5	1	1	1	1