**Revision Sheet**

***Writing Expressions***

Write expression for each of the following:

1. The sum of ***a*** and ***b*** squared taken from the sum of the square of ***a*** and the square of ***b***
2. The product of ***a*** triple and b cubed
3. The difference between, the product of ***a*** and ***b*** doubled, and, the quotient of ***a*** cubed and ***b*** tripled
4. Cube of ***a*** is tripled and taken from the square of, ***a*** doubled
5. Write three different expressions for the shaded region in each diagram below and show that they are equivalent:
	1. . b) c)

*x*

1

10

5

*x+5*

*x+1*

*2x*

*3*

*x*

7

*x*

13

25

153

***Substitution***

Given that a=-5 b= 0.5 c= d= 10, find the value of:

1. 2) 3) 4)

***Simplification***

Simplify the following:

***Expansion***

Expand and simplify the following:

1) 2)

3) 4)

***Factorisation***

Factorise completely:

1. 2) 3)

***Equations***

Solve the following:

Write and solve equation solve each of the following problems:

1. A number is reduced by 5 then double and the result is 24, what is the number?
2. Six less than triple a number is taken from double the number and the result is 17, what is the number?
3. The length of a square is 5 less than double the width. If the perimeter is 26, find the area.
4. The sum of three consecutive odd numbers is 99, what are the numbers?
5. Bob is 7 years older than Jane. Two years from now he will be twice as old and Jane was last year, how old are they now?
6. Jack bout 24 fruits. Some were apples which cost 50 cents and the rest oranges 10 cents each. If he paid$7.60 for all the fruit, how many of each fruit did he buy?

***Formula***

1. Given that where P is the perimeter, L is the length and W is the width of a rectangle:
	1. Find p when the length is 35cm and the width is 18cm
	2. Rearrange the formulae and make **W** the subject. Use your new formula to find the width of a rectangle with perimeter of 17 cm and length of 6cm.
2. Given that the temperature is degrees Celsius (C) is five ninth of the temperature in Fahrenheit (F) reduced
	1. Write a formula to find C, that is
	2. Use your formula in a) to find the temperature is of a piece of iron which is 95
	3. Rearrange your formula in a) to make F the subject. Use your new formula to find the temperature (in Fahrenheit) of an oven which now .