Revision: Manipulation of Variables

1. Re arrange the following equations to make y the dependent variable

1. $3x = 6y - 9$
2. $4y - 2x = 6$
3. $\frac{3y}{x} = 6$
4. $\frac{3y}{(x-1)} = 6$
5. $\frac{3y+2}{(x-1)} = 6$
6. $4x + 3 = 2(y - 1)$

2. What is the value of y in each of the above equations if $= 4$?

1.
2.
3.
4.
5.
6.

3. Factorise the following expressions:

1. $2x^2 - x$
2. $4x^3 + 8x^2$
3. $x^2 + 8x + 7$
4. $2x^2 + 16x + 14$
5. $x^2 - 5x + 6$
6. $x^2 - x - 12$

Hence, what would be the possible values of $\boldsymbol{x}$ in each of the above expressions if they equalled zero?

END