

## Functions F4 – Polynomials

Is the following a polynomial?

1.  $xyz$                       2.  $\sqrt{a^2b}$                       3.  $3x^2 + 4cd^2 - 2z$                       4.  $\frac{23x}{4yz}$                       5.  
 $4x^{-3}$

State the degree of the following polynomials:

6.  $5x^4 - 3x^2 + 12$                       7.  $4x^2y^2 + 5x^3y^3 + 7x^{10}y$                       8.  $131x - zy$

Simplify

9.  $(x^4 - 3x^3 + 2x - 5) + (2x^3 - 3x^2 - x + 6)$

10.  $(3x^2 + 2x - 7) - (2x^2 - 3x + 4)$

11.  $(x + 2)(x - 4)$

12.  $(2x^2 + 3x)(x^3 - 4x^2)$

13.  $(3x^2 - 2x + 4)(x - 4)$

14.  $4x(x + 2) - (3x - 1)(2x + 4)$