

Study Guide

1) Write the following polynomials in standard form, find leading coefficient and degree.

a) $2x + 5x^2 - 1 =$

b) $-4 + 6x^3 + 3x^8 =$

c) $7x^2 + 2 - 4x =$

d) $y^3 + 3y^4 - 3 =$

2) Add or subtract the following polynomials:

a) $(2x+3) + (-4x+5) =$

b) $(3x-5) - (7x+3) =$

c) $(-x^2+2x+5) + (3x^2-4x-6) =$

d) $(3x^2-8x-5) - (x^2-5x-10) =$

3) Multiply or divide the following polynomials.

a) $2x(3x+4) =$

b) $x^2(7x+2) =$

c) $5(x+3) =$

d) $\frac{x^3-2x^2+5x}{x} =$

e) $\frac{4x^7-8x^6}{2x^6} =$

4) Expand the following polynomials.

a) $(x+2)^2 =$

b) $(y-3)^2 =$

c) $(x+5)(x-5) =$

d) $(2x^2+1)^2 =$

5) Solve the following polynomial equations. (Some require factoring first).

a) $x(x-5) = 0$

b) $(y-2)(y-5) = 0$

c) $3t^2 - t = 0$

d) $10k^3 - 15k^2 = 0$