

Review – Dividing Polynomials I

Divide each of the following:

$$1) \frac{(18x-6)}{(6)} = \frac{18x}{6} - \frac{6}{6} \leftarrow \text{You don't have to show this step. :)} \\ = 3x - 1$$

$$2) \frac{(21x^2-28x+14)}{(7)} = \frac{21x^2}{7} - \frac{28x}{7} + \frac{14}{7} \\ = 3x^2 - 4x + 2$$

$$3) \frac{(9x^3-12x^2+3x)}{(-3x)} = \frac{9x^3}{-3x} - \frac{12x^2}{-3x} + \frac{3x}{-3x} \\ = -3x^2 + 4x - 1$$

$$4) \frac{(-2x^2y^2+4xy)}{(2)} = \frac{-2x^2y^2}{2} + \frac{4xy}{2} \\ = -x^2y^2 + 2xy$$

$$5) \frac{(3b^3-2b^2+4b)}{(-b)} = \frac{3b^3}{-b} - \frac{2b^2}{-b} + \frac{4b}{-b} \\ = -3b^2 + 2b - 4$$

$$6) \frac{(75w^3-30w^2+65w)}{(-5w)} = \frac{75w^3}{-5w} - \frac{30w^2}{-5w} + \frac{65w}{-5w} \\ = -15w^2 + 6w - 13$$

$$7) \frac{(7m^2p-28m^2p^2+49p^2m)}{(7mp)} = \frac{7m^2p}{7mp} - \frac{28m^2p^2}{7mp} + \frac{49p^2m}{7mp} \\ = m - 4mp + 7p$$

$$8) \frac{(6x^2y^2+3x^2y-18y^2x+12xy)}{(-3xy)} = \frac{6x^2y^2}{-3xy} + \frac{3x^2y}{-3xy} - \frac{18y^2x}{-3xy} + \frac{12xy}{-3xy} \\ = -2xy - x + 6y - 4$$