6.7 Dividing Polynomials - Day 2

Recall: To divide with the same base -

Subtract the exponents

Examples: Divide.

1. $\frac{x^6}{x^2}$

x^4

2. $\frac{6y^7}{2y^4}$

$3y^3$

3. $\frac{8m^4n^6}{4mn^5}$

$2m^3n$

4. $\frac{16a^{10}}{-4a^4}$

$-4a^6$

5. $\frac{-15x^3y^3}{-5xy^2}$

$3x^2y$

6. $\frac{10m^2}{2m^7}$

$5m^{-5}$ or $\frac{5}{m^5}$

$\frac{5}{m^5}$

To divide a polynomial by a monomial:

* Separate and divide each term in the numerator (polynomial) by the monomial.

7. $\frac{2x+2y}{2}$

$\frac{2x}{2}+\frac{2y}{2}$

$x+y$

8. $\frac{8a^5-6a^4}{2a^2}$

$\frac{8a^5}{2a^2}-\frac{6a^4}{2a^2}$

$4a^3-3a^2$

9. $\frac{21a^2b-3ab}{3ab}$

$\frac{21a^2b}{3ab}-\frac{3ab}{3ab}$

$7a-1$

10. $\frac{-21a^5+7a^3+14a}{7a}$

$\frac{-21a^5}{7a}+\frac{7a^3}{7a}+\frac{14a}{7a}$

$-3a^4+a^2+2$

11. $\frac{24x^3y^4-18x^2y^2-6xy}{-6xy}$

$\frac{24x^3y^4}{-6xy}-\frac{18x^2y^2}{-6xy}-\frac{6xy}{-6xy}$

$-4x^2y^3+3xy+1$

12. $\frac{12n^8-6n^6+8n^3}{2n^2}$

$\frac{12n^8}{2n^2}-\frac{6n^6}{2n^2}+\frac{8n^3}{2n^2}$

$6n^6-3n^4+4n$

13. $\frac{12a^2b^2+9a^2b-6ab^2}{-3ab}$

$\frac{12a^2b^2}{-3ab}+\frac{9a^2b}{-3ab}-\frac{6ab^2}{-3ab}$

$-4ab-3a+2b$

HOMEWORK

Worksheet - HW 6.7 - Day 2