

## 5.1 & 5.2 Review & Practice - In-class Assignment

1.  $c^{12} \cdot c^{-4} \cdot c^6$

2.  $\frac{8m^3n^2}{4mn^3}$

3.  $(a^4)^5$

4.  $\frac{x^{-2}y}{x^4y^{-1}}$

5.  $\left(\frac{a^2b}{a^{-3}b^2}\right)^{-1}$

6.  $\left(\frac{x^2y}{xy^3}\right)^2$

7.  $(-5a^2b^3)^2(abc)^2$

8.  $\frac{2^3c^{-4}t^2}{2^{-2}c^4t^5}$

9.  $4j(-j^{-2}k^2)(3j^3k^{-7})$

10.  $\frac{2mn^2(3m^2n)^2}{12m^3n^4}$

### Exercises:

Simplify using long division.

1.  $\frac{4xy^2 - 2xy - 2x^2y}{xy}$

2.  $(3a^2b - 6ab + 5ab^2)(ab)^{-1}$

3.  $(x^4 - 3x^3 + 2x^2 - 4x + 4) \div (x - 1)$

4.  $\frac{x^3 + 3x^2 - 5x - 4}{x + 4}$

5.  $(x^4 - 3x^2 - 18) \div (x - 2)$

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

**Simplify using synthetic division.**

7.  $(4x^2 + 5x + 1) \div (x + 1)$

8.  $(x^4 - 3x^3 - 7x - 14) \div (x - 4)$

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

10.  $(4x^4 + 2x^3 + 3x + 5) \div (2x + 1)$