

Topic 5.3  
Dividing Polynomials  
Homework  
**Simplify.**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1.  $\frac{4x^2y + 2xy^2 + 6xy}{xy}$

2.  $\frac{12x^3y - 15y^3z - 9xz^2}{3x^3yz^2}$

3.  $(16x - 14y^5 + z^3) \div (8y^4z)$

4.  $\frac{x^3y^2 - x^2y^3}{3x^8y^7}$

5.  $(7x^8 - 9y^6z^7 + 2) \div (r^2x^3y)$

6.  $\frac{rsv - wxy^2 + rz^3}{r}$

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**Use synthetic division to find each quotient.**

7.  $(x^3 + y^3) \div (x + y)$

8.  $(10x^3 - 90x) \div (2x - 6)$

9.  $(8x^2 - 56x + 98) \div (2x - 7)$

10.  $(6x^2 + 7x - 3) \cdot (2x + 3)^{-1}$