

9.4 Algebra Worksheet  
Section 12-5B  
Polynomial Long Division

Name \_\_\_\_\_  
Date \_\_\_\_\_  
Assignment # \_\_\_\_\_

Divide. Write your answers as polynomials or as mixed expressions.

1.)  $\frac{m^2 - m - 12}{m - 4}$

2.)  $\frac{18e^2 + 27e + 10}{6e + 5}$

3.)  $\frac{35t^2 - 51t + 16}{7t - 6}$

4.)  $\frac{3x^2 - 2x^3 + x - 1}{x + 1}$

5.)  $\frac{d^3 + 125}{d - 2}$

6.)  $\frac{r^4 + 2r^2 - 1}{r^2 + 2r - 3}$

Given: The first polynomial is a factor of the second polynomial. Factor the second polynomial completely.

7.)  $x - 3$ ;  $x^3 - x^2 - 21x + 45$

8.)  $w^2 - 1$ ;  $w^5 - w^3 + 8w^2 - 8$