

## Written Homework Section 4.2

(Page 209: #16, 42)

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

Due: \_\_\_\_\_

In Problems 11–20, use the Remainder Theorem to find the remainder when  $f(x)$  is divided by  $x - c$ . Then use the Factor Theorem to determine whether  $x - c$  is a factor of  $f(x)$ .

**16.**  $f(x) = 2x^6 - 18x^4 + x^2 - 9; x + 3$

Answer: \_\_\_\_\_

In Problems 39–56, find the real zeros of  $f$ . Use the real zeros to factor  $f$ .

**40.**  $f(x) = x^3 + 8x^2 + 11x - 20$

(a)  $f(x)$  has at \_\_\_\_\_ real zero.

(b) Possible rational zero answer:

$p =$	
$q =$	
$\frac{p}{q} =$	

Answer zeros are: \_\_\_\_\_