

# ALG 2 Chapter 5 Summary Classwork Answer Key

1) a)  $y = -5x^5 + 2x^2 + 3x$       Quintic trinomial  
Rises to left, falls to right

b)  $f(x) = -x^4 + 1$       Quartic binomial  
Falls to left, Falls to right

2) a)  $f(x) = x^3 + 2x^2 - 3x$

b)  $f(x) = x^4 - x^3 - 6x^2 + 4x + 8$

3) a)  $x = -9$  or  $x = 0$  or  $x = 1$

b)  $x = -2$  or  $x = -1$  or  $x = 1$  or  $x = 2$

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

b)  $x^3 + 3x^2 + 9x + 29 + \frac{86}{x-3}$

5) a)  $2x^2 - 5x + 4 + \frac{-3}{x+1}$

b)  $x^3 + x^2 + x + 6 + \frac{13}{x-1}$

6) a)  $\pm 1, \pm \frac{1}{2}, \pm 7, \pm \frac{7}{2}$

b)  $\pm 1, \pm \frac{1}{3}, \pm 2, \pm \frac{2}{3}, \pm 3, \pm 4, \pm \frac{4}{3},$   
 $\pm 6, \pm 12$

7) a)  $f(x) = x^3 - 3x^2 + 7x - 5$

b)  $f(x) = x^4 - 4x^3 + 2x^2 - 4x + 1$