AGS 3 Name: _____ Period: _____ Date: _____

Assignment 3.7

Determine how many roots each function has.

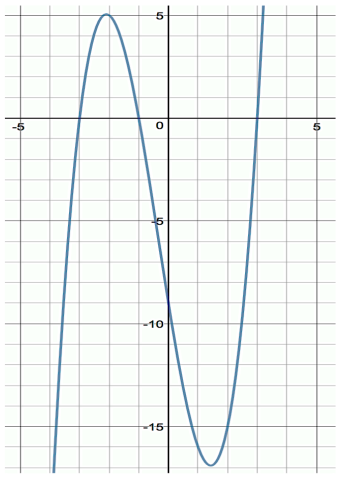
1. a. $a(x) = x^2 + 3x - 10$ b. $b(x) = x^3 + x^2 - 9x - 9$

c. $c(x) = -2x - 4$ d. $d(x) = x^4 - x^3 - 4x^2 + 4x$

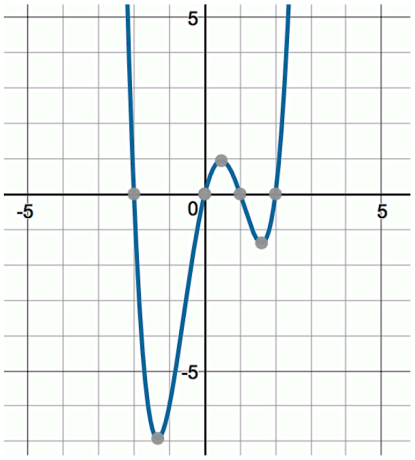
e. $f(x) = -x^2 + 6x - 9$ f. $g(x) = x^6 - 5x^4 + 4x^2$

2. Use the given graph to write the equation in factored form.

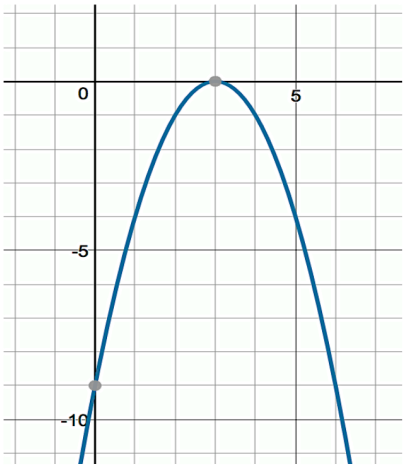
a.



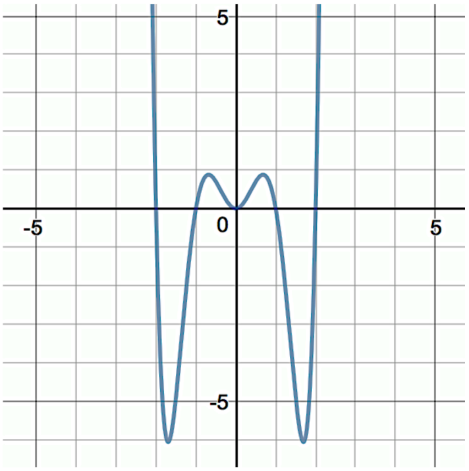
b.



c.



d.



Refresh Your Memory

Find the zeros (solve for x when $y = 0$) for each quadratic. Use any method, just show your work.

3. $y = x^2 + 20x + 51$

4. $y = x^2 + 10x + 25$

5. $y = 3x^2 + 12x$

6. $y = x^2 - 11$

7. $y = x^2 + x - 1$

8. $y = x^2 + 2x + 3$