

Learning Goal(s):

3.3.1: Solve & Graph it!

Date: _____

1. Solve.

a) $x^3 - x^2 - 2x = 0$

b) $0 = x^3 - 2x^2 - 8x$

c) $0 = x^4 - 1$

d) $0 = 3x^2 + 12x + 12$

e) $0 = -x^3 + 2x^2 + 4x - 8$

f) $-x^4 - 4x^3 - 4x^2 = 0$

g) $6x^3 + 10x^2 + 4x = 0$

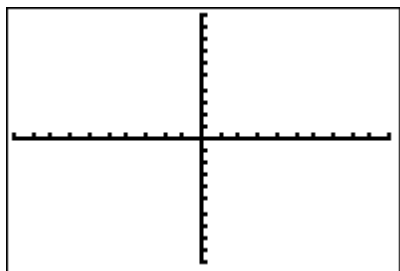
h) $0 = x^3 - 7$

i) $0 = x^4 - 2x^3 - 5x^2 + 6x$

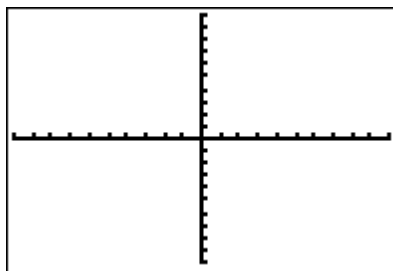
2. Use your graphing calculator to sketch a graph of the functions below.

Compare the roots from #1 with the sketches to determine if these roots and x -intercepts match.

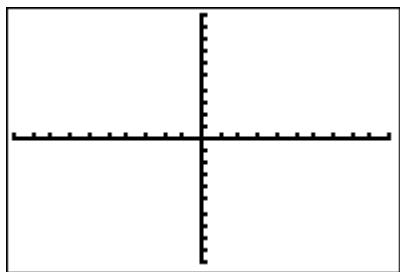
a) $y = x^3 - x^2 - 2x$



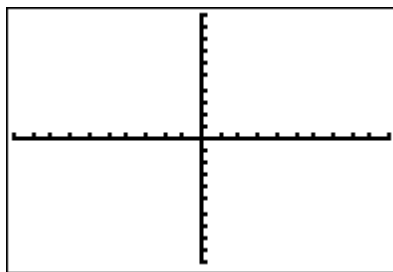
b) $y = x^3 - 2x^2 - 8x$



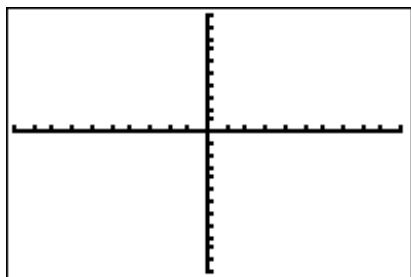
c) $y = x^4 - 1$



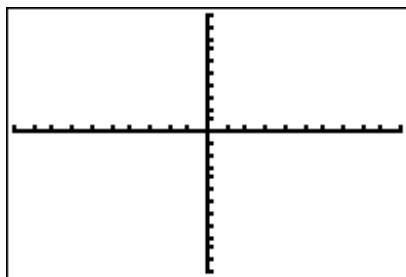
d) $y = 3x^2 + 12x + 12$



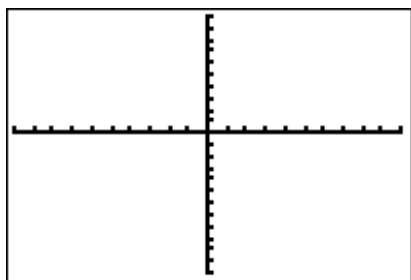
e) $y = -x^3 + 2x^2 + 4x - 8$



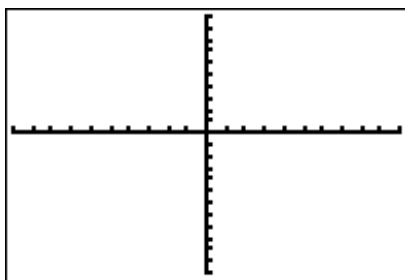
f) $y = -x^4 - 4x^3 - 4x^2$



g) $y = 6x^3 + 10x^2 + 4x$



h) $y = x^3 - 7$



i) $y = x^4 - 2x^3 - 5x^2 + 6x$

