

Solving Polynomial Equations

Date: _____

Recall: Quadratic Formula, $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$. Any equation of the form $f(x) = 0$ can be solved if $f(x)$ can be expressed as a combination of linear and quadratic factors.

Example 1

- a) Find the family of cubic functions whose x-intercepts are -3 , 0 , and 2 .
b) Find the particular member of the above family whose graph passes through the point $(-1, 12)$.

Example 2

Solve $3x^3 + x^2 - 12x - 4 = 0$

Example 3

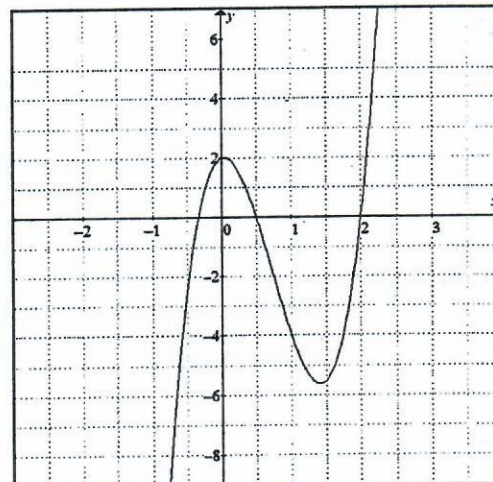
Solve a) $x^3 + 9x^2 + 13x + 5 = 0$

b) $x^3 + 4x - 5 = 0$

Date: _____

Example 4

Solve $6x^3 - 13x^2 + x + 2 = 0$



Example 5

Solve $x^4 - 24x^2 - 25 = 0$

Example 6

Solve $(x^2 - 5x - 5)(x^2 - 5x + 3) = 9$

Homework

P.110 #3 – 5, 6 – 8 eo,
14, 15, 18, 20, 22