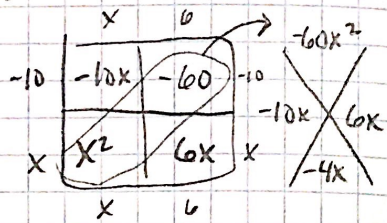


HW 7, Chapter 8: Finding roots and graphing.

1) $x^2 - 4x - 60 = 0$

Step 1: factor
(box + diamond)

$(x-10)(x+6)$



$$x^2 - 4x - 60 = (x-10)(x+6)$$

Step 2: Solving for x (x-intercepts)

x-intercepts are when $y = 0$

original equation $x^2 - 4x - 60 = 0$ ← y

replace sum, with product (factors)

$$(x-10)(x+6) = 0$$

* Zero Product Property says if the

product is $= 0$, at least one of the factors is 0.

So... either $x-10 = 0$

or $x+6 = 0$

Step 3:

find the values of x for when $y = 0$
(x-intercepts)

$$\begin{array}{r} x-10=0 \\ +10 \quad +10 \\ \hline x=10 \end{array}$$

$$\begin{array}{r} x+6=0 \\ -6 \quad -6 \\ \hline x=-6 \end{array}$$

So, my x-intercepts are:

$(10,0)$ and $(-6,0)$