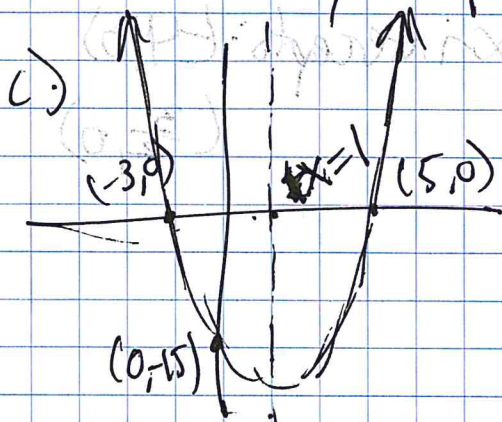
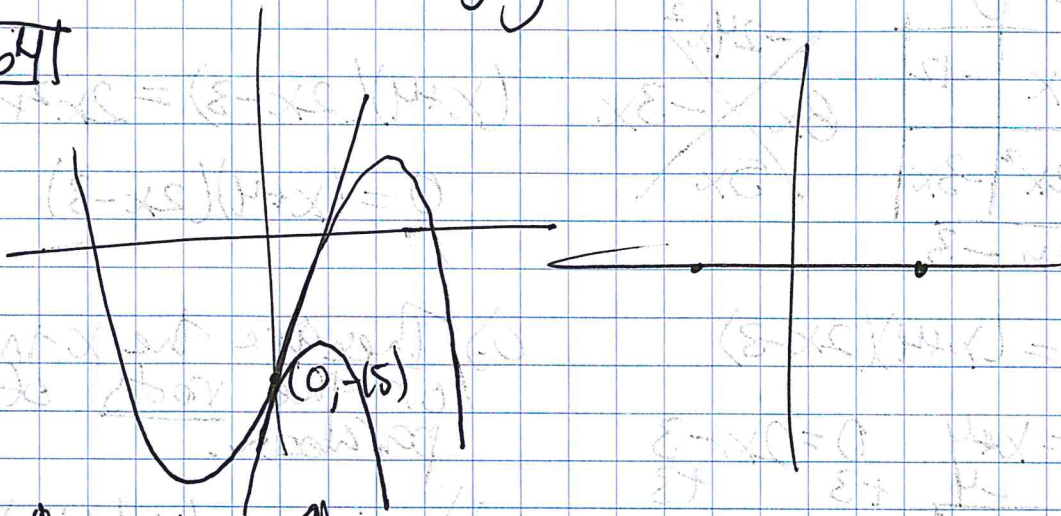


B.2.2 #64-68 + Classifying W.S.

B-64



B-65 a.) For all x-intercepts, the y-value will be 0.
For all y-intercepts, the x-value will be 0.

b.) $(0, -12)$: y-intercept $y = 2(0)^2 + 5(0) - 12$
 $y = -12$

c.) $0 = 2x^2 + 5x - 12$

d.) No, at this point we cannot solve because of the x^2 and the bx term.

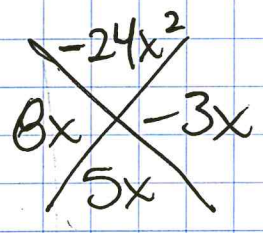
Solutions of a quadratic are called Roots, and are the Zeros of the equation.

B-66 If the product of 2 or more numbers is zero then you know one of the numbers must be 0.

Zero Product Property

18-67 (a) $y = 2x^2 + 5x - 12$

+4	8x	-12
x	2x ²	-3x
	<hr/>	
	2x - 3	



$(x+4)(2x-3) = 2x^2 + 5x - 12$

$0 = (x+4)(2x-3)$

b) $0 = (x+4)(2x-3)$

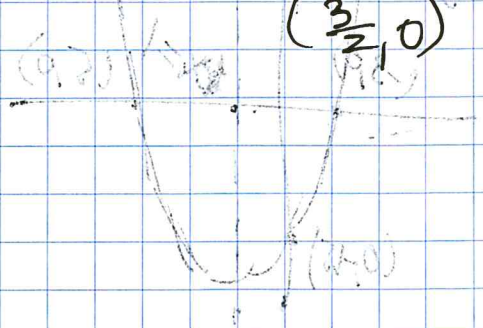
$$\begin{array}{r} 0 = x + 4 \\ -4 \quad -4 \\ \hline 1x = -4 \end{array}$$

$$\begin{array}{r} 0 = 2x - 3 \\ +3 \quad +3 \\ \hline 3 = 2x \\ \frac{3}{2} = \frac{2x}{2} \\ \hline \frac{3}{2} = x \end{array}$$

c) These are the x-intercepts or the roots of the parabola.

d) x-intercepts: $(-4, 0)$

$(\frac{3}{2}, 0)$



0 is the only x-intercept, the y-intercept will be 0. For all x-intercepts, the x-intercept will be 0.

$$\begin{array}{r} 0 = (x+4)(2x-3) \\ 0 = 2x^2 + 5x - 12 \\ \frac{0}{2} = \frac{2x^2 + 5x - 12}{2} \end{array}$$

graphing: $(-4, 0)$
 $0 = 2x^2 + 5x - 12$

No. of the point in the first quadrant is 0. The x-intercept is 0.

Graphing the parabola $y = 2x^2 + 5x - 12$ we see that the x-intercepts are $(-4, 0)$ and $(\frac{3}{2}, 0)$.

If the product of two numbers is 0, then at least one of the numbers must be 0. This is the Zero Product Property.