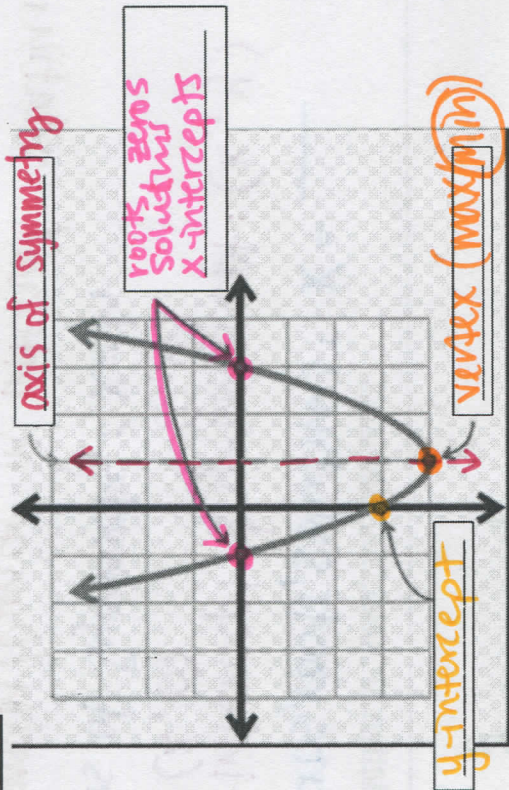


TASK 1:



TASK 2:

- a) maximum/minimum is the vertex either upside ^{max} down or normal parabola
- b) axis of symmetry line that cuts the parabola in half through the vertex
- c) roots, zeros, solutions, x-intercepts point(s) where the parabola crosses the x-axis ^{max} _{min}
- d) vertex highest or lowest point of the parabola
- e) y-intercept "c", where your parabola crosses the y-axis

TASK 3: Recall from Algebra 1: find the product using both

FOIL

$$-3(x-2)(x+3)$$

FOIL

$$-3(x^2 + 3x - 2x - 6)$$

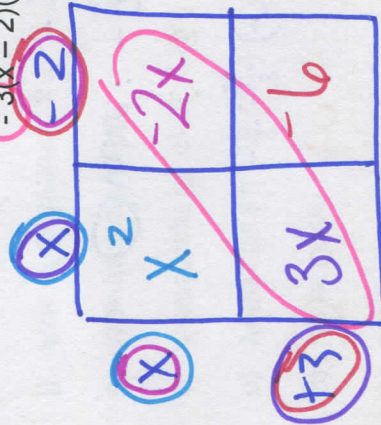
$$-3(x^2 + x - 6)$$

$$-3x^2 - 3x + 18$$

TASK 3: Recall from Algebra 1: find the product using both

Punnett Squares

$$-3(x-2)(x+3)$$



TASK 4: Reminder from Algebra 1:

Standard Form of a Quadratic: $y = ax^2 + bx + c$

Vertex: $\left(-\frac{b}{2a}, f\left(-\frac{b}{2a}\right)\right)$

Tell me what you learn from the "a", "b", and "c" in the standard

form:

"a" opens $\uparrow +a$ VS $a > 1$ vertex
 $\downarrow -a$ VC $0 < a < 1$

"b" vertex

"c" y-intercept

Notation for each characteristic:

zeros, roots, solutions: $x = \underline{\quad}$

x-intercept & y-intercept: (x, y)
 $(x, 0)$
 $(0, y)$

Axis of Symmetry: $x = h$

Domain/Range in interval notation

Still need help with:

TASK 5: Notation matters!

a) Zeros: $x = -2, 1$

b) Up or Down $+a$

c) Vertex (h, k) : $\left(-\frac{1}{2}, -\frac{7}{2}\right) (-0.5, -3.5)$

d) Y-intercept $(0, c)$: $(0, -3)$

e) Max or Min Value: $-\frac{3}{2}$

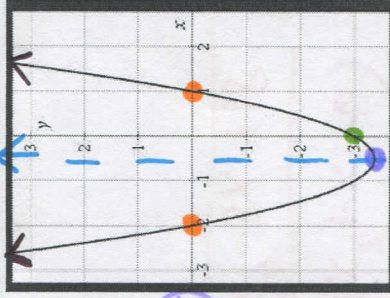
f) Axis of Symmetry: $x = -\frac{1}{2}$

g) Domain: $(-\infty, \infty)$

h) Range: $[-3.5, \infty)$

i) Increasing: $(-0.5, \infty)$

j) Decreasing: $(-\infty, -0.5)$



Reminders to Myself:

• Increasing & decreasing is always
() using x-values
describing the y-values

• arrows on all parabolas