

Alg 2 Class Notes Monday 8-27

$$y = f(x) = mx + b$$

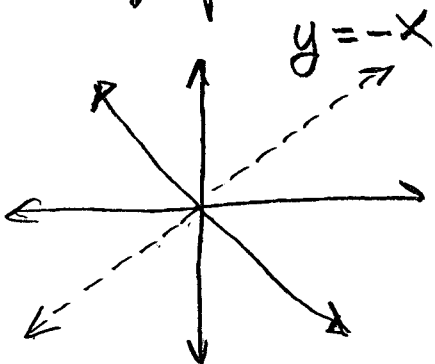
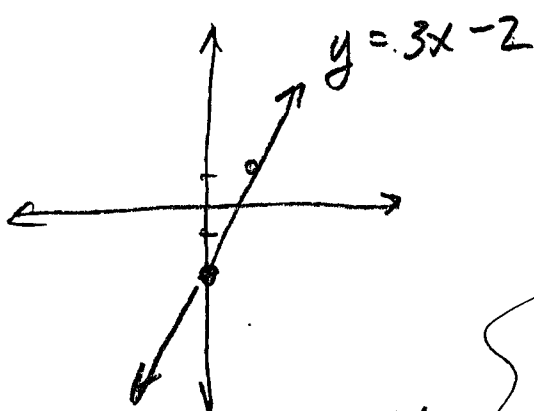
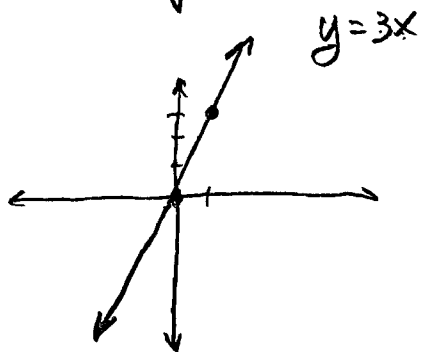
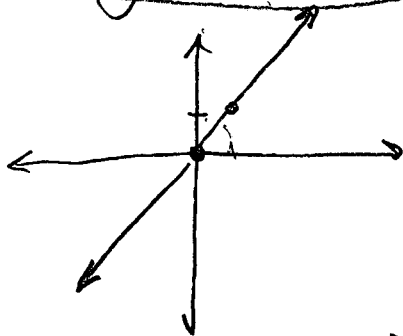
$\uparrow$ slope $\uparrow$ y-intercept
 $(0, b)$

$$y = a(x-h) + k$$

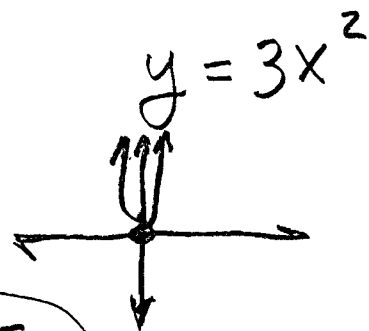
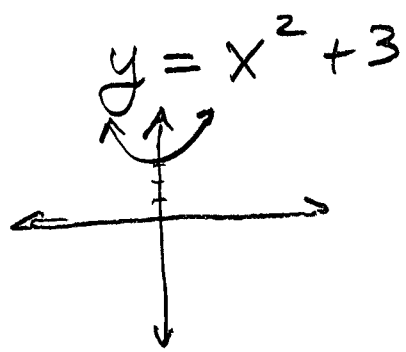
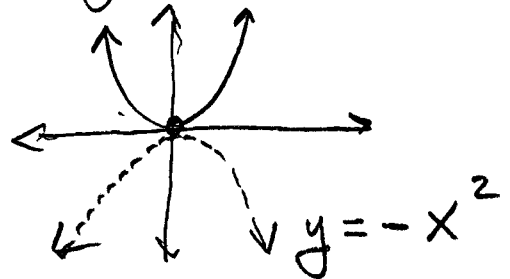
$\uparrow$ $\uparrow$
 horz SHIFT vert SHIFT
 Vertex (h, k)

PARENTS

$$y = 1x + 0$$



$$y = x^2$$

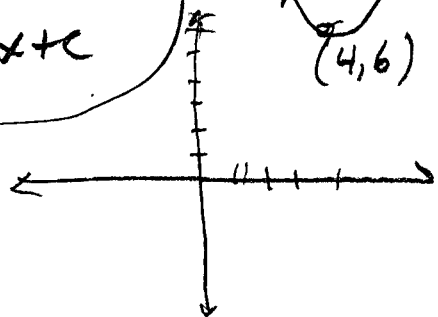


Standard Form

$$y = f(x) = ax^2 + bx + c$$

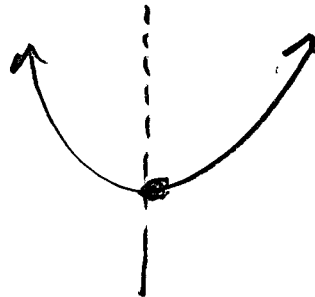
$$y = (x-4)^2 + 6$$

$\nwarrow$ $\nearrow$
 $(4, 6)$

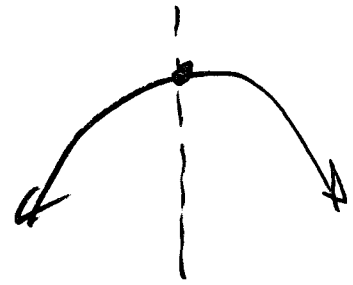


$$y = ax^2 + bx + c$$

AOS



AOS



AOS

$$x = -\frac{b}{2a}$$

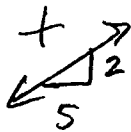
$$\textcircled{3} \quad 2x - 5y = 20$$

$$y = mx + b$$

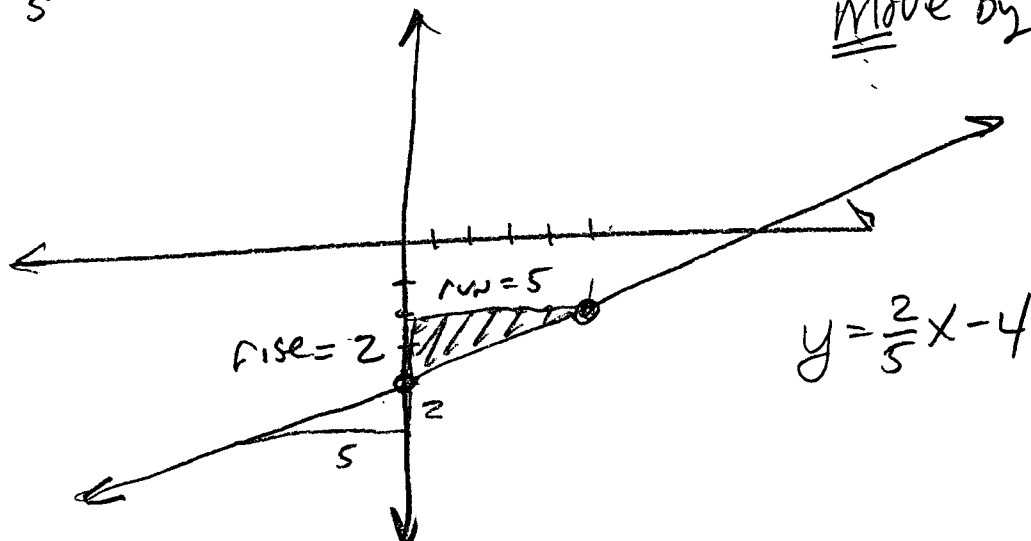
$$\frac{-5y}{-5} = \frac{-2x + 20}{-5}$$

$$y = \frac{2}{5}x - 4$$

mx + b



begin at (0, b)
 $\equiv$
Move by slope



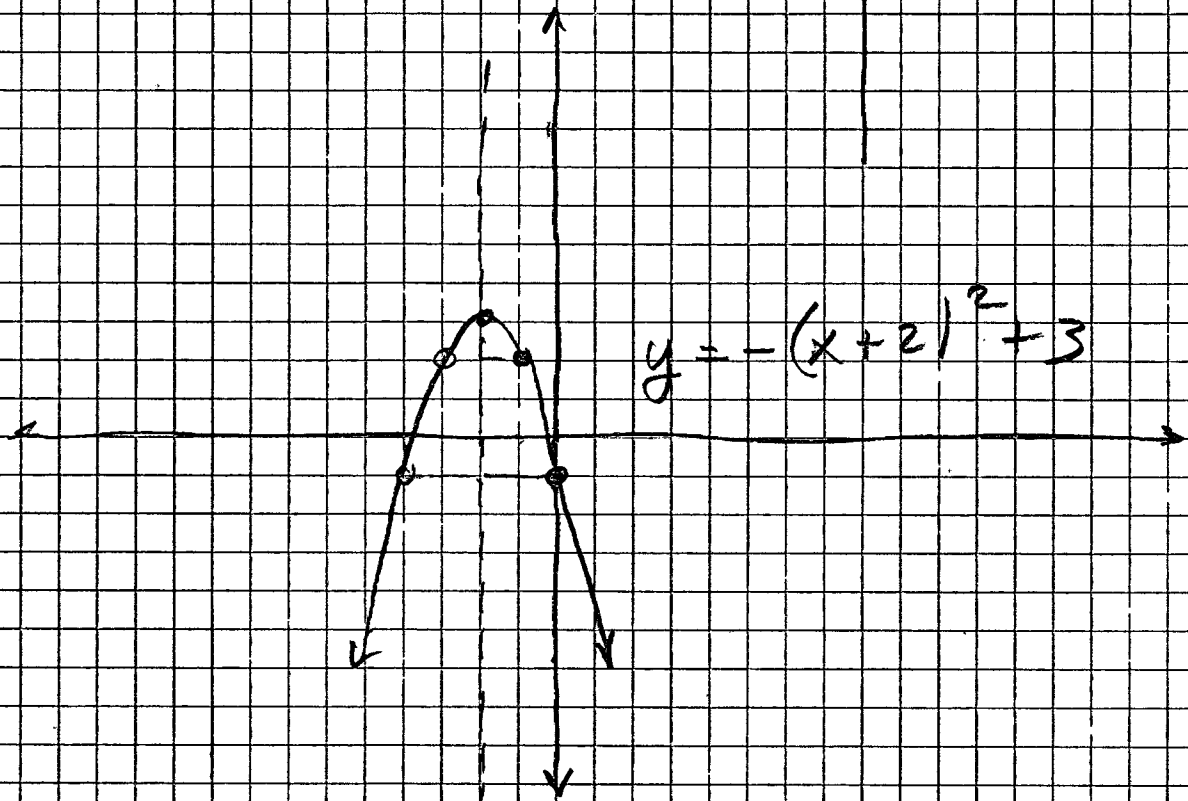
$$QF = X = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

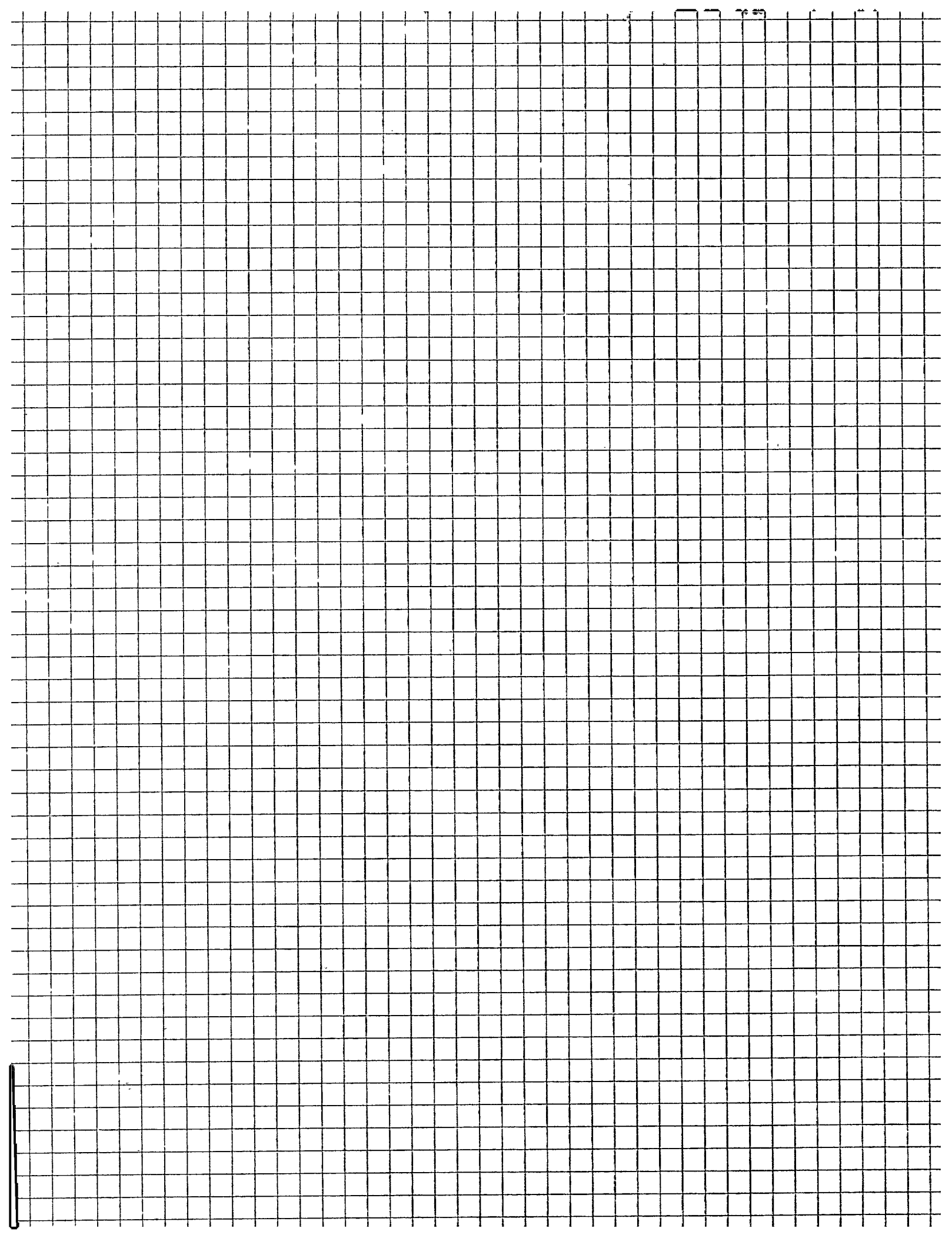
⑮ $y = -(x+2)^2 + 3$

$V(-2, 3)$

$a = -1$

x	y
-1	2
0	-1





② $y = f(x) = -x^2 - 8x - 15$

$a = -1$

$\text{AOS} = x = -\frac{b}{2a}$

$x = -\frac{8}{2} = -4$

$y = f(-4)$

x	$-x^2 - 8x - 15$
-4	$-(-4)^2 - 8(-4) - 15$ $-16 + 32 - 15$ 1
0	-15
-2	$-(-2)^2 - 8(-2) - 15$ $-4 + 16 - 15 = -3$
-1	$-(-1)^2 - 8(-1) - 15$ $-1 + 8 - 15 = -8$

