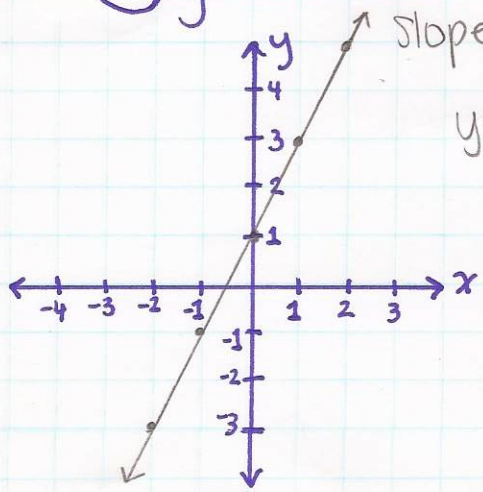
Algebra 1: Graphing Practice (Mixed)

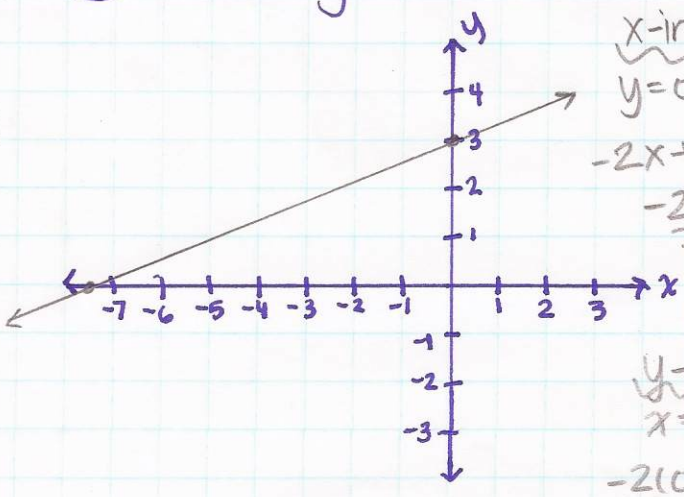
(π) $y = 2x + 1$



Slope $= \frac{2}{1}$

y-intercept: 1

(α) $-2x + 5y = 15$



x-intercept

$y = 0$

$-2x + 5(0) = 15$

$\frac{-2x}{-2} = \frac{15}{-2}$

$x = -7.5$

$(-7.5, 0)$

y-intercept

$x = 0$

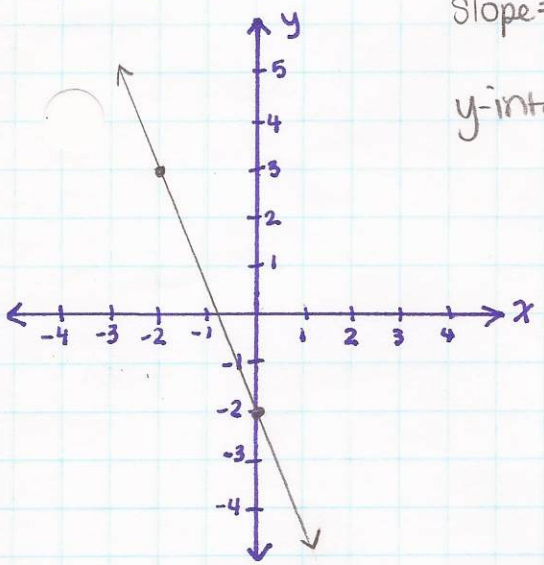
$-2(0) + 5y = 15$

$\frac{5y}{5} = \frac{15}{5}$

$y = 3$

$(0, 3)$

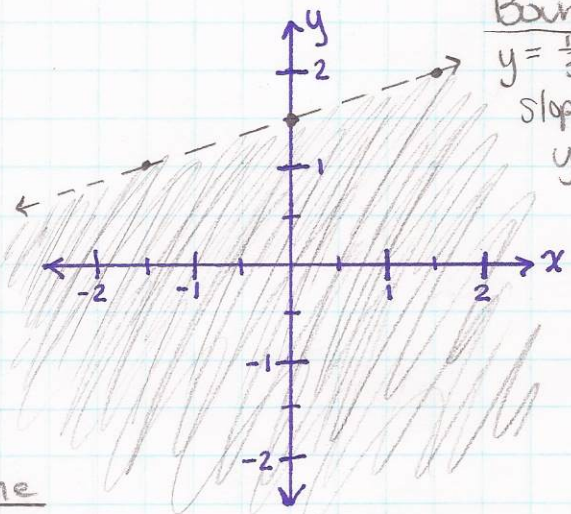
(β) $y = -\frac{5}{2}x - 2$



Slope $= -\frac{5}{2} = \frac{-5}{2}$ or $\frac{5}{-2}$

y-intercept: -2

(θ) $y < \frac{1}{3}x + \frac{3}{2}$



Boundary Line

$y = \frac{1}{3}x + 3/2$

Slope $= \frac{1}{3}$

y-intercept: $\frac{3}{2} = 1.5$

Test a point

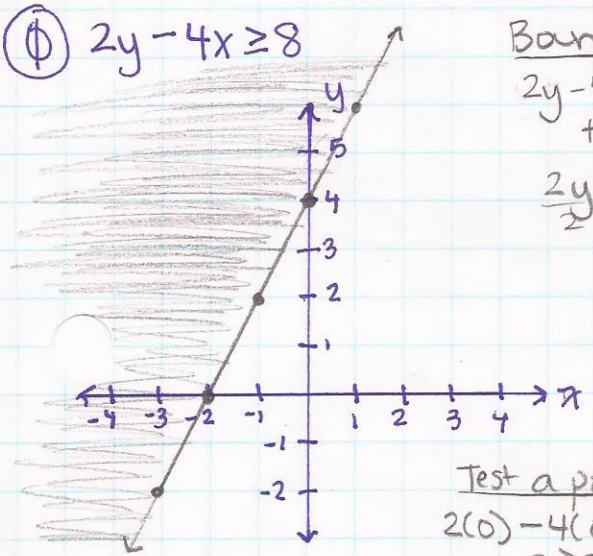
$(0, 0)$

$y < \frac{1}{3}x + 3/2$

$0 < \frac{1}{3}(0) + 3/2$

$0 < 3/2$ ✓

(φ) $2y - 4x \geq 8$



Boundary Line

$2y - 4x = 8$

$+4x \quad +4x$

$\frac{2y}{2} = \frac{4x + 8}{2}$

$y = 2x + 4$

Slope $= \frac{2}{1}$

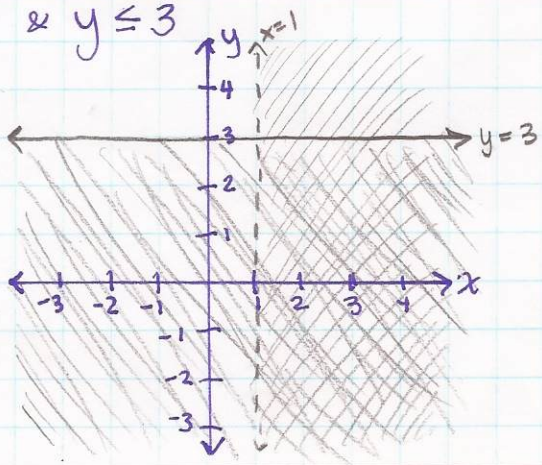
y-intercept $= 4$

Test a point $(0, 0)$

$2(0) - 4(0) \geq 8$

$0 \geq 8$ ✗ no.

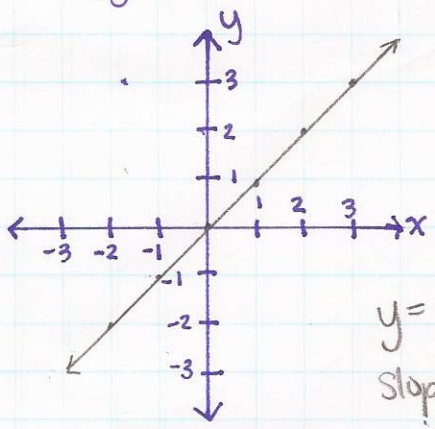
(ε) $x > 1$ & $y \leq 3$



Algebra 1: Graphing Practice (Mixed) – page 2

(τ) $y = x$

x	y
0	0
1	1
2	3
−1	−1
−2	−2



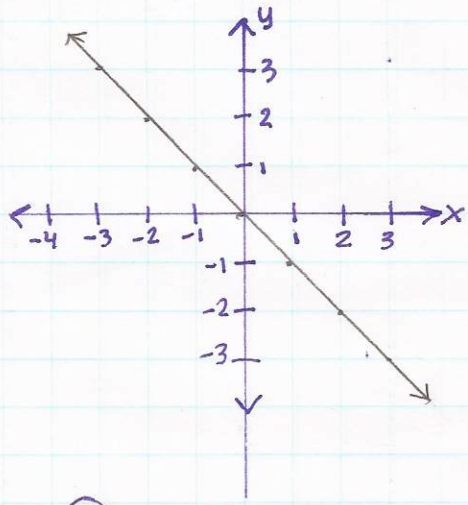
$y = x + 0$

Slope = 1

y-intercept = 0

(ρ) $y = -x$

x	y
−2	2
−1	1
0	0
1	−1
2	−2



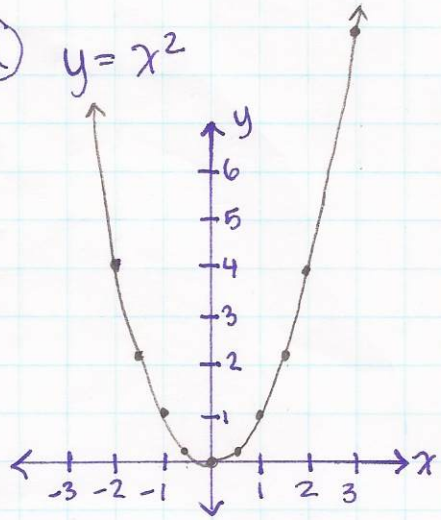
$y = -x + 0$

slope = −1

y-intercept = 0

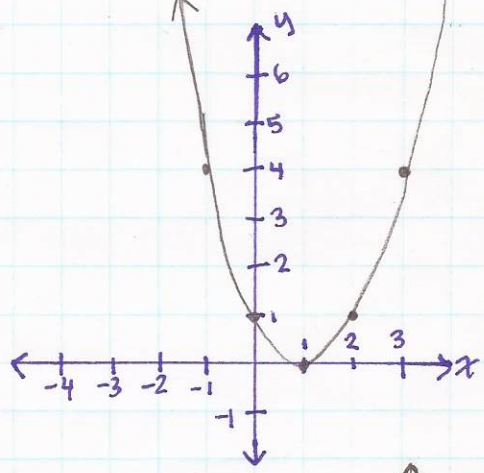
(λ) $y = x^2$

x	y
−3	9
−2	4
−1	1
0	0
1	1
2	4
3	9
½	¼
−½	¼
1.5	2.25
−1.5	2.25



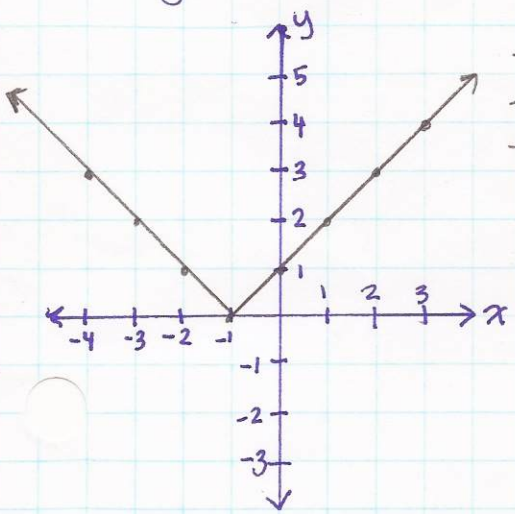
(δ) $y = x^2 - 2x + 1$

x	y
−3	16
−2	9
−1	4
0	1
1	0
2	1
3	4
4	9



(♥) $y = |x + 1|$

x	y
−3	2
−2	1
−1	0
0	1
1	2
2	3
3	4
−4	3
−5	4



(★) $y = x^3$

x	y
−3	−27
−2	−8
−1	−1
0	0
1	1
2	8
3	27
½	⅛
−½	−⅛