

Algebra IIb
GC-2
Solutions

1) $2x - y = 6$

maxs: none

mins: none

left restriction: $-\infty$ or none

right restriction: ∞ or none

y-ints: $(0, -6)$

x-ints: $\{3\}$

2) $y = |x| + 2$

maxs: none

mins: $(0, 2)$

left restriction: $-\infty$ or none

right restriction: ∞ or none

y-ints: $(0, 2)$

x-ints: none

3) $y = \sqrt{16 - x^2}$

maxs: $(0, 4)$

mins: $(-4, 0)$ and $(4, 0)$

left restriction: $x = -4$

right restriction: $x = 4$

y-ints: $(0, 4)$

x-ints: $\{\pm 4\}$

4) $y = -\frac{1}{2}(x-1)^2 + 3$

maxs: $(1, 3)$

mins: none

left restriction: $-\infty$ or none

right restriction: ∞ or none

y-ints: $(0, 2.5)$

x-ints: $\{-1.45, 3.45\}$

5) $y = x^3 - 3x + 1$

maxs: relative: $(-1, 3)$

mins: relative: $(1, -1)$

left restriction: $-\infty$ or none

right restriction: ∞ or none

y-ints: $(0, 1)$

x-ints: $\{-1.88, 1.53\}$

6) $y = \sqrt{x+9}$

maxs: none

mins: $(-9, 0)$

left restriction: $x = -9$

right restriction: ∞ or none

y-ints: $(0, 3)$

x-ints: $\{-9\}$

7) $y = x^4 - 2x^2$

maxs: relative: $(0, 0)$

mins: $(-1, -1)$ and $(1, -1)$

left restriction: $-\infty$ or none

right restriction: ∞ or none

y-ints: $(0, 0)$

x-ints: $\{\pm 1, 1\}$

8) $x^2 + y^2 = 25$

maxs: $(0, 5)$

mins: $(0, -5)$

left restriction: $x = -5$

right restriction: $x = 5$

y-ints: $(0, 5)$ and $(0, -5)$

x-ints: $\{-5, 5\}$