

Math 1021 Review for Test 3 Answer Key

1) $x = 3/2, 4$

2) $x = 0, 2$

3) $x = \pm \frac{3}{5}$

4) $x = \pm 2\sqrt{3}$

5) $x = 5 \pm 2\sqrt{7}$

6) $x = \frac{2 \pm \sqrt{2}}{2}$

7) $x = 3 \pm 2\sqrt{3}$

8) $x = \frac{3 \pm \sqrt{3}}{2}$

9) $1 + 5i$

10) $12 - 5i$

11) $\frac{5}{13} + \frac{12}{13}i$

12) $x = 2 \pm i$

13) $x = \frac{-2 \pm i\sqrt{6}}{2}$

14) $x = 12$

15) $x = \pm\sqrt{2}$

16) $x = 3$

17) $y = 16$

18) $x = 4, x = 5$

19) $(-\infty, 3) \cup (7, \infty)$

20) $[-3, 1]$

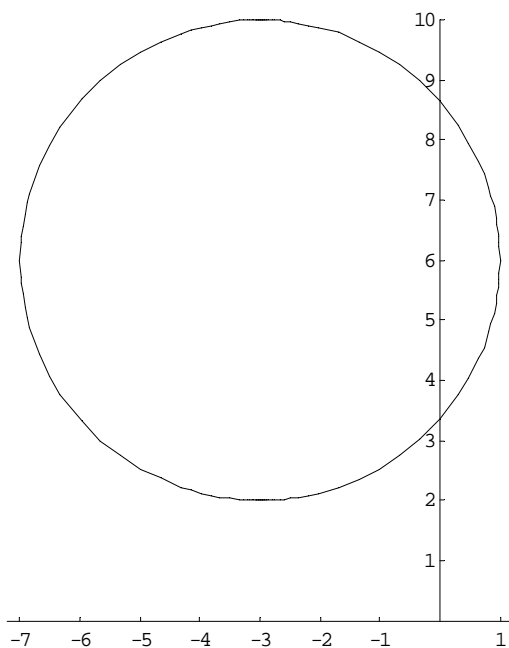
21) $(-4, 2]$

22) $(-\infty, -3] \cup (-2, 2) \cup [4, \infty)$

23) a) $2 \text{ sec} \leq t \leq 5 \text{ sec}$

b) $t = 3.5 \text{ sec}$ and $y = 196 \text{ ft}$

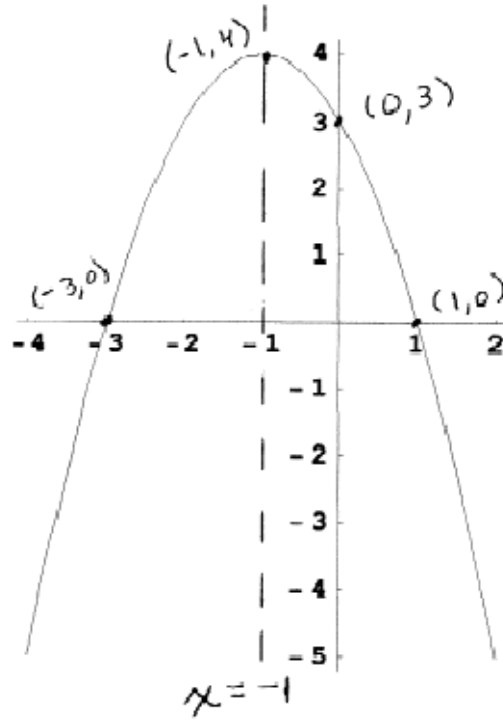
24) $(x + 3)^2 + (y - 6)^2 = 16$



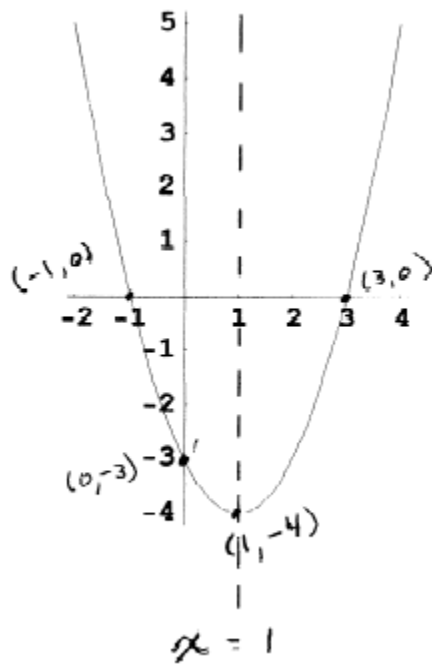
25) $(x + 3)^2 + (y - 2)^2 = 36$; Center: $(-3, 2)$; Radius: $r = 6$

26) $(x - 2)^2 + (y - 1)^2 = 20$

27) Vertex: $(-1, 4)$; Axis of Symmetry: $x = -1$; x -intercepts: $(1, 0)$ and $(-3, 0)$; y -intercept: $(0, 3)$



28) Vertex: $(1, -4)$; Axis of Symmetry: $x = 1$; x -intercepts: $(3, 0)$ and $(-1, 0)$; y -intercept: $(0, -3)$



29) 500 ft by 250 ft