Name:_____
Date:_____

Hippocampus High School

Working with Quadratic Equations, — Lesson A38

Question 1. Find the real roots of the following equations (if they exist).

(a) $x = -5 \ \{-6 < y < -4\}$

(b) $(x + 4.9)^2 + (y + 4.5)^2 = 0.25$ $\{-4.9 \leq x \leq 5\}$

(c) $2x + 2 = y \ \{-4 \leq x \leq -3\}$

(d) $-2x - 10 = y \ \{-3 \leq x \leq -2\}$

(e) $y = -5 \ \{-3.5 \leq x \leq -2.5\}$

(f) $x = -1 \ \{-6 < y < -4\}$

(g) $y = -4 \ \{-1 < x < -0.5\}$

(h) $y = -5 \ \{-1 < x < -0.5\}$

(i) $(x + 0.5)^2 + (y + 7 - 2.5)^2 = 0.25$ $\{x > -0.5\}$

(j) $-x - 6 = y \ \{-1 < x < 0\}$

Question 2. Write the following equations in Slope-intercept form

(a) $2x + -8 = y \ \{1 \leq x \leq 2\}$

(b) $-2x - 0.01 = y \ \{2 \leq x \leq 3\}$

(c) $y = -5 \ \{1.5 \leq x \leq 2.5\}$

(d) $x = 4 \ \{-6 < y < -4\}$

(e) $(x - 4.1)^2 + (y + 4.5)^2 = 0.25$ $\{4.1 \leq x \leq 6\}$

(f) $x = 5.5 \ \{-6 < y < -4\}$

(g) $y + -6 = x \ \{5.5 < x < 6.5\}$

(h) $x = 7 \ \{-6 \leq y \leq -4\}$

(i) $y = -4 \ \{7 \leq x \leq 8\}$

(j) $y = -5 \ \{7 \leq x \leq 8\}$

Question 3. Write the following equations in Standard form.

(a) $y = -6 \ \{7 \leq x \leq 8\}$

(b) $(-x + 10)^2 + (y+5)^2 = 1 \ \{x < 10.7\}$

(c) $x = 10.7 \ \{-5.7 \leq y \leq -5\}$

(d) $y = -5 \ \{9.75 \leq x \leq 10.7\}$

(e) $x = 12 \ \{-6 \leq y \leq -4\}$

(f) $y = -4 \ \{11 \leq x \leq 12.5\}$

(g) $y = -6 \ \{11.5 \leq x \leq 12.5\}$

(h) $(x - 14)^2 + (y + 5)^2 = 1 \ \{x \leq 14.8\}$
