

Algebra Workshop

Name: _____

Worksheet 2

1. Solve the following equations:

(a) $1.3x = 0.7x + 9$

(b) $\frac{x}{4} - 2 = 5$

(c) $3(x + 4) - 5(x + 1) = 3$

(d) $\frac{x + 3}{5} - 1 = 2x$

2. Compute the following without using your calculator:

(a) 4^2

(b) $(-3)^2$

(c) $\sqrt{25}$

(d) $\sqrt{36}$

3. Solve the following equations. For some of these problems, the answer is not an integer or a fraction. If the answer is not an integer or a fraction, give your answer to two decimal places.

(a) $x^2 + 5 = 21$

(b) $2x^2 - 3 = 15$

(c) $2\sqrt{x} = 6$

(d) $\sqrt{x-1} = 4$

(e) $\frac{4x^2 - 1}{2} + 3 = 7$

(f) $\frac{3x^2}{5} + 1 = 7$

(g) $\frac{\sqrt{2x-1}}{3} + 4 = 5$

(h) $2\sqrt{3x-1} + 4 = 8$

4. Find all solutions to the following system of equations.

$$3x + y = 7$$

$$2x - 3y = 1$$

5. Find all solutions to the following system of equations.

$$3x + 2y = 5$$

$$2x + y = 4$$

6. Jack has 96 marbles, which are colored red, yellow, and green. He has four fewer red marbles than green marbles, and he has three times as many yellow marbles as green marbles. Determine how many marbles he has of each color.

7. Beth has 100 coins in nickels and dimes. She has a total of \$8.10. How many nickels and how many dimes does she have?