

BLC150–Algebra Workshop

Worksheet 2

Name: _____

1. Solve these.

a. $1.3x = 4 - 0.7x$	b. $\frac{x}{4} - 2 = -1$
c. $3(x + 4) - 5(x + 1) = -5$	d. $\frac{x+16}{2} - 4 = x$

2. Compute the following without using a calculator:

a. $4^2 =$	c. $(3)^2 =$	e. $2\sqrt{36} =$
b. $(-3)^2 =$	d. $\sqrt{9} =$	f. $-\sqrt{81} =$

3. Solve the following equations for x . Round to 2 decimal places if and when necessary.

a. $2x^2 - 3 = 15$	b. $x^2 + 5 = 21$
c. $\frac{\sqrt{2x-1}}{3} + 4 = 5$	d. $2\sqrt{3x-1} = 2\sqrt{17}$

e. $\sqrt{x + 18} = 5$

f. $2\sqrt{x} = 4\sqrt{2}$

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

a. $x + y = 2$

$$2x - 3y = 39$$

b. $3x + 2y = 5$

$$2x + y = 4$$

5. Jack has 96 marbles, which are colored red, yellow, and green. He has 4 fewer red than green, and 3 times as many yellow as green. How many marbles of each color does he have?

6. Lucy can feel that she has 7 coins in her pocket. She knows that they add up to \$0.95 because she recalls buying a Tootsie Roll™ that cost \$0.05 with a dollar bill. She cannot distinguish the quarters from the nickels. Can she deduce how many nickels and quarters she has? What is the distribution?