Basic Algebra Worksheet 3 — answers and links on following page

1.

$$4x - 3y = 29$$
$$6x - 2y = 36$$

In the system of equations above, what is the value of $2x - y$?

2.

x	$f(x)$
-1	3
1	5
3	0
5	-12

For $f(x)$ shown above, what is $f(f(1))$?

3. How far apart are the points $(-12, -1)$ and $(-3, 2)$? *(Note: answer in radical form.)*

4. The area of a circle is 16π. What is its circumference?

5. The ratio of cats to dogs in a certain shelter is 5:3. If there $6d$ dogs in the shelter, how many cats are there?

6. Solve: $3(x + 7) > -5(x + 1)$

7. If $(x + 2)^2 + (x + 4)^2 - x^2 = (x + a)(x + b)$, what are the values of a and b?

8. The graph of $y = cx + 2$ passes through the point (a, b). What is the slope of the line in terms of a and b?

9. What are the two solutions to the equation $2x^2 - x - 3 = 0$?

10. What are the two solutions to $x^2 = 20$?

Use the links below for additional practice for any questions that you miss, or find other links through baytutoring.com/resources or on your own.

1.	13	[Solving a system of equations](#)
2.	-12	[Functions](#)
3.	$3\sqrt{10}$	[Coordinate geometry: distance](#)
4.	8π	[Geometry: circles](#)
5.	$10d$	[Solving proportions](#)
6.	$x > -\frac{13}{4}$	[Inequalties/algebra](#)
7.	2 and 10	[FOILing/multiplying](#)
8.	$\frac{b-2}{a}$	[Coordinate geometry: slope](#)
9.	$\frac{3}{2}$ and -1	[Factoring](#), [Quadratic formula](#)
10.	$-2\sqrt{5}$ and $2\sqrt{5}$	[Factoring](#), [Quadratic formula](#)

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