

Basic Algebra Worksheet 2 — answers and links on following page

1. If $f(x) = 3x^2 - 1$ and $g(x) = \frac{x-3}{2}$, what is $g(f(4))$?

6. If $a^2 - b^2 = 15$ and $a + b = -5$, what is $a - b$?

2. If the distance between $(3, -7)$ and $(x, 5)$ is 15, what are the two possible values of x ?

7. What are the solutions to the equation $x^2 - 3x = -3$?

3. When a certain number is multiplied by -3 , the result is greater than if 12 were subtracted from that same number. Write and solve an inequality to describe this number.

8. What is $(x + 2)^2 - (x - 2)^2$?

4. The slope between $(4, 7)$ and $(-2, 9)$ is perpendicular to the slope between $(4, 3)$ and $(6, y)$. What is the value of y ?

9. A granola bar has 70 more calories than a banana. A box of 6 granola bars and a bunch of 5 bananas have 1,630 calories combined. How many calories are in a banana?

5. In a certain right triangle, the side across from a 30° angle has a length of 4 inches. What is the perimeter of the triangle?

10.

$$\frac{4}{x-3} = \frac{8}{x-4}$$

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. 22
2. -6, 12
3. $-3x > x - 12, x < 3$
4. 9
5. $12 + 4\sqrt{3}$
6. -3
7. $\frac{3 \pm i\sqrt{3}}{2}$
8. $8x$
9. 110
- 10.2

[Functions](#)

[Coordinate geometry: distance](#)

[Inequalities/algebra](#)

[Coordinate geometry: slope](#)

[Geometry/triangles](#)

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[Quadratic formula \(or factoring\)](#)

[FOILING/multiplying](#)

[Solving a system of equations](#)

[Solving proportions](#)