Basic Algebra Worksheet 4 — answers and links on following page

1. What is the distance between the points $(-3, 4)$ and $(1, -2)$? *(Note: answer in radical form)*

2. Given $g(x) = 4x^2 - 1$, for what values of a does $g(a) = 24$?

3. Three waters and two soft drinks cost $9.75. Four waters and three soft drinks cost $13.75. How much is a soft drink?

4. What is the area of an equilateral triangle whose sides are 6 inches long?

5. How many real solutions are there to the equation $4x^2 - 4x + 1 = 0$?

6. If the ratio of $4x$ to $3y$ is 3:5, what is the ratio of x to y?

7. Expand: $2x(4x - 3)^2$

8. For a certain number, three more than twice the number is the same as eleven less than the number. What is the number?

9. In its third year, a charity raised $6,400. In its tenth year, the charity raised $10,950. What is the average yearly increase in the amount of money raised by the charity?

10. If $a + b = 4$ and $a - b = -3$, what is the value of $3a^2 - 3b^2$?

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. $2\sqrt{13}$ Coordinate geometry: distance
2. $5, -5$ Functions
3. $2.25   Solving a system of equations
4. $9\sqrt{3}$ Geometry/triangles (30°/60°/90°)
5. 1 Quadratic formula (discriminant)
6. $\frac{9}{20}$ Solving proportions
7. $32x^3 - 48x^2 + 18x$ FOILing/multiplying
8. -14 Algebra
9. $650 per year   Coordinate geometry: slope
10. -36 Factoring (difference of squares)

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