

**Directions:** Do these 10 questions to the best of your ability. Write down your answers. When you're done, go the next page and follow the directions there.

1. Solve:

$$3 + 5(x + 1) = 3x - 2(x + 7) + 6$$

2. Solve:

$$2 - 3(x + 2) < 11$$

3. Solve:

$$\begin{aligned} 2x + 7y &= 5 \\ 3y + 4x &= 21 \end{aligned}$$

4. If  $f(x) = ax - 3$  and  $f(4) = 17$ , what is the value of  $f(-2)$ ?

5. Alonzo is a car salesman whose monthly pay consists of a base salary plus a bonus for every car. If he sells 8 cars, he earns \$4,400, and if he sells 11 cars, he earns \$5,200. What is the equation for his monthly pay,  $P$ , in terms of the number of cars he sells,  $c$ ?

6. Three less than four times a number is the same as five times two less than the number. What is the number?

7. What is  $x$  if the slope between  $(3, 8)$  and  $(x, 6)$  is  $-\frac{1}{4}$ ?

8. What is the distance between the points  $(-4, 3)$  and  $(8, -2)$ ?

9. One year, the price of a certain stock went down by 20%. The next year, the price went up by 5%. What was the overall percent change in price for the two years?

10. A mixture of candies is made by combining Kit Kats, Twix, and M&M's in a ratio of 3:4:5. If a certain bag includes 60 candies, how many of them are Kit Kats?

**Directions:** Check your answers below. Circle any questions that you missed, and any questions that you got right but had some uncertainty or just think you should review.

For each of those questions, complete the online exercises below. Be sure to do the reading and complete all of the practice questions at the bottom of the pages.

1.  $-4$                       <https://www.mathsisfun.com/algebra/equations-solving.html>
2.  $x > -5$                       <https://www.mathsisfun.com/algebra/inequality-solving.html>
3.  $x = 6, y = 1$                       <http://www.mathsisfun.com/algebra/systems-linear-equations.html>
4.  $-13$                                       <https://www.mathsisfun.com/sets/function.html>
5.  $P = 2000 + 300c$                       <https://tinyurl.com/ppuo3jw>
6.  $7$                                       <https://www.mathsisfun.com/algebra/word-questions-solving.html>
7.  $11$                                       <https://www.mathsisfun.com/geometry/slope.html>
8.  $13$                                       <https://www.mathsisfun.com/algebra/distance-2-points.html>
9.  $-16\%$                                       <https://www.mathsisfun.com/numbers/percentage-change.html>
10.  $15$                                       <https://www.mathsisfun.com/numbers/ratio.html>