

Directions: Do all 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:

$$3(x - 2) + 5 = 4x - 3(x - 1)$$

2. Solve:

$$8 - 3x < 5$$

3. Solve:

$$\begin{aligned} 3x + 4y &= 29 \\ 5x - 6y &= -15 \end{aligned}$$

4. If $f(x) = -4x + 7$, for what value of x does $f(x) = -5$?

5. The height of a tree is currently 20 feet, and it grows 1.5 feet per year. Write an equation for its height, h , in terms of the number of years from now, x .

6. If Joe earned \$6 more per hour, then he could work 35 hours per week and earn \$50 more per week than he does now working 40 hours per week. What is his current hourly earnings?

7. What is y if the slope between $(-5, y)$ and $(1, 2)$ is $-\frac{3}{2}$?

8. What is the distance between the points $(2, 2)$ and $(-4, 10)$?

9. A sweater is discounted by 30% from its original price. A week later, the price is reduced by another 20%. What percent lower than the original price is the new price?

10. At a certain college there are 6 women for every 5 men. If there are 2750 students at the college, how many of them are men?

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. 2 <https://www.mathsisfun.com/algebra/equations-solving.html>
2. $x > 1$ <https://www.mathsisfun.com/algebra/inequality-solving.html>
3. $x = 3, y = 5$ <http://www.mathsisfun.com/algebra/systems-linear-equations.html>
4. 3 <https://www.mathsisfun.com/sets/function.html>
5. $h = 1.5x + 20$ <https://tinyurl.com/ppuo3jw>
6. \$32 <https://www.mathsisfun.com/algebra/word-questions-solving.html>
7. 11 <https://www.mathsisfun.com/geometry/slope.html>
8. 10 <https://www.mathsisfun.com/algebra/distance-2-points.html>
9. 44% <https://www.mathsisfun.com/numbers/percentage-change.html>
10. 1,250 men <https://www.mathsisfun.com/numbers/ratio.html>