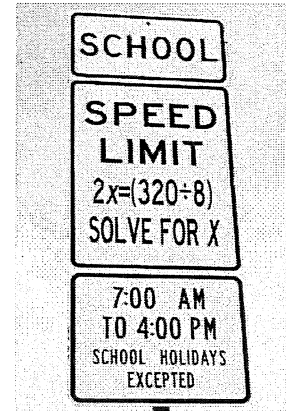


1.7 Solving Equations, Literally

A Practice Understanding Task



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Solve each of the following equations for x :

1. $\frac{3x+2}{5} = 7$

2. $\frac{3x+2y}{5} = 7$

3. $\frac{4x}{3} - 5 = 11$

4. $\frac{4x}{3} - 5y = 11$

5. $\frac{2}{5}(x+3) = 6$

6. $\frac{2}{5}(x+y) = 6$

7. $2(3x+4) = 4x+12$

8. $2(3x+4y) = 4x+12y$

Write a verbal description for each step of the equation solving process used to solve the following equations for x . Your description should include statements about how you know what to do next. For example, you might write, "First I _____, because _____."

9. $\frac{ax+b}{c} - d = e$

10. $r \cdot \sqrt{\frac{mx}{n}} + s = t$

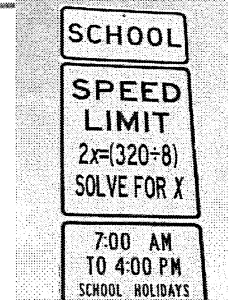
Name: _____

Getting Ready | 1.7

Ready, Set, Go!

Ready

Topic: Inequalities



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Use the inequality $4 < 6$ to complete each row in the table.

Apply each operation to the original inequality $4 < 6$	Result	Is the inequality true or false?
1. Add 4 to both sides		
2. Add -4 to both sides		
3. Subtract 10 from both sides		
4. Multiply both sides by 4		
5. Divide both sides by 2		
6. Multiply both sides by -3		
7. Divide both sides by -2		

In general, what operations, when performed on an inequality, *reverse* the inequality?

Set

Topic: Solve literal equations

Solve for the indicated variable.

8. Solve the following equation to isolate F : $C = \frac{5}{9}(F - 32)$

9. For $V = \frac{1}{3}\pi r^2 h$, rewrite the formula to isolate the variable h .

10. The area formula of a regular polygon is $A = \frac{1}{2}Pa$. The variable a represents the apothem and P represents the perimeter of the polygon. Rewrite the equation to highlight the value of the perimeter, P .

Getting Ready | 1.7

11. The equation $y = mx + b$ is the equation of a line. Isolate the variable m .

12. The equation $y = mx + b$ is the equation of a line. Isolate the variable x .

13. $Ax + By = C$ is the standard form for a line. Isolate the equation for x .

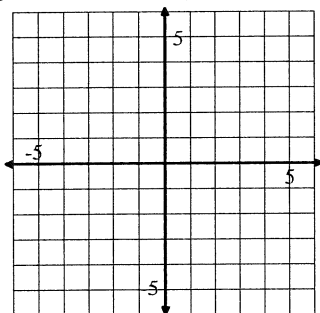
14. $Ax + By = C$ is the standard form for a line. Isolate the equation for y .

Go

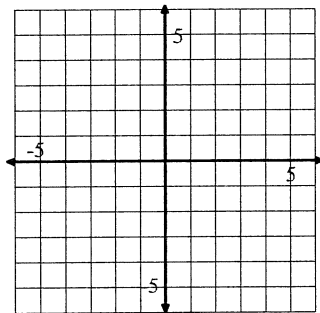
Topic: Solve systems of linear equations

Solve linear equations and pairs of simultaneous linear equations (simple, with a graph only) by graphing both lines and finding where they intersect. Justify the solution numerically.

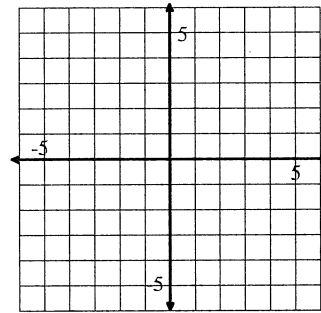
15. $y = x + 3$ and $y = -x + 3$



16. $y = 3x - 6$ and $y = -x + 6$



17. $2x = 4$ and $y = -3$



Need Help? Check out these related videos:

<http://www.khanacademy.org/math/algebra/solving-linear-inequalities/v/equations-and-inequalities>

<http://www.khanacademy.org/math/algebra/solving-linear-equations/v/solving-for-a-variable>

<http://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/v/solving-linear-systems-by-graphing>

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