Ready, Set, Go!

Ready
Topic: Inequalities
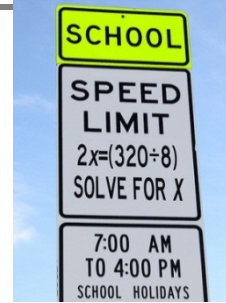
Use the inequality 4 < 6 to complete each row in the table.

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.

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.

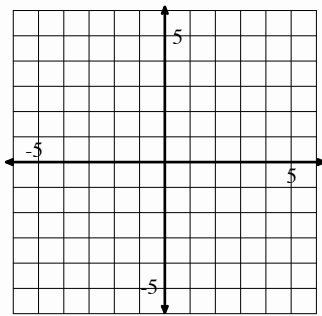13. $Ax + By = C$ is the standard form for a line. Isolate the equation for x.

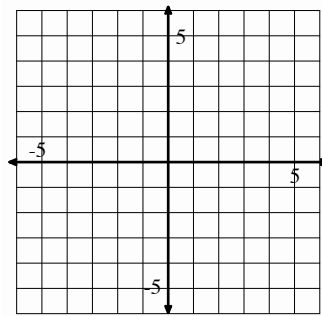14. $Ax + By = C$ is the standard form for a line. Isolate the equation for y.

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.
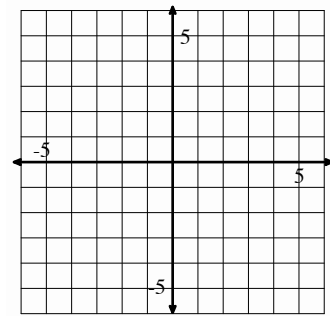
15. $y = x + 3 \text{ and } y = -x + 3$ 16. $y = 3x - 6 \text{ and } y = -x + 6$ 17. $2x = 4 \text{ and } y = -3$

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