

Chapter 6

6.1 Solve inequalities using addition and subtraction

Graph inequalities

Write an inequality given a graph

6.2 Solve inequalities using multiplication and division

Solve inequality word problems

6.3 Solve multi-step inequalities

Solve multi-step word problems using inequalities

Write and solve inequalities involving geometry

Determine if there is 'no solution' 'one solution' or 'infinite solutions'

6.7

Graph linear inequalities in two variables

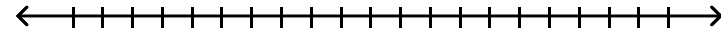
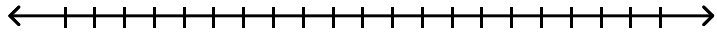
Determine if a point is a solution to an inequality

Write and graph inequalities given a word problem

6.1-6.3 Solve Each Inequality and Graph the Solution.

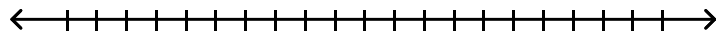
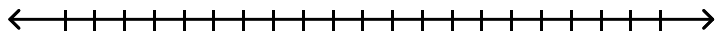
1. $3x > 12$

2. $-5x \leq 15$



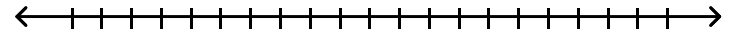
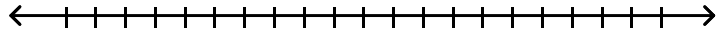
3. $2(3y - 2) \geq 5y - 2$

4. $-6x - 9 < 9$

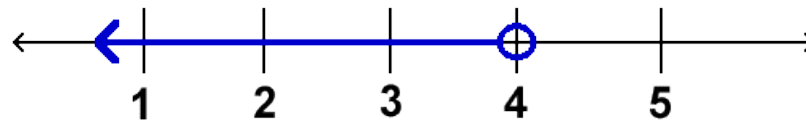


5. $3(2x - 2) \geq 2(2x - 4)$

6. $3(4x - 2) - 8x < 2(x - 4) + 6$



7. Write a one-step inequality that, when solved, has the following solution. Prove your inequality works by solving.



6.7 Decide whether the given ordered pair is a solution to each linear inequality.

8. $-3y - 2x < 12$ $(5, -6)$

9. $4x - 7y \geq 28$ $(-2, 4)$

Translate the verbal phrase into an inequality then solve.

10. Four less than x is at least 15.

11. Twice the difference of x and 8 is at least 4.

Word Problem:

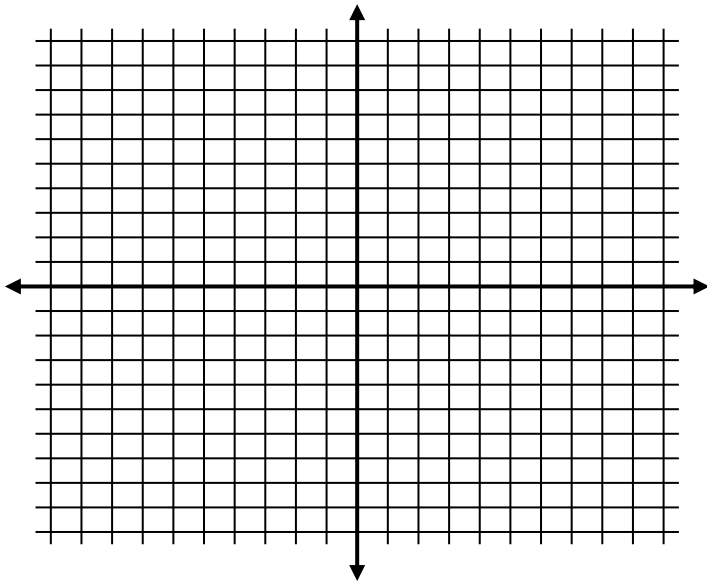
12. You are buying supplies for school. You buy a backpack for \$26 and pencils for \$.25 each. You only have \$31.50 to spend.

Write and solve an inequality to represent the situation.

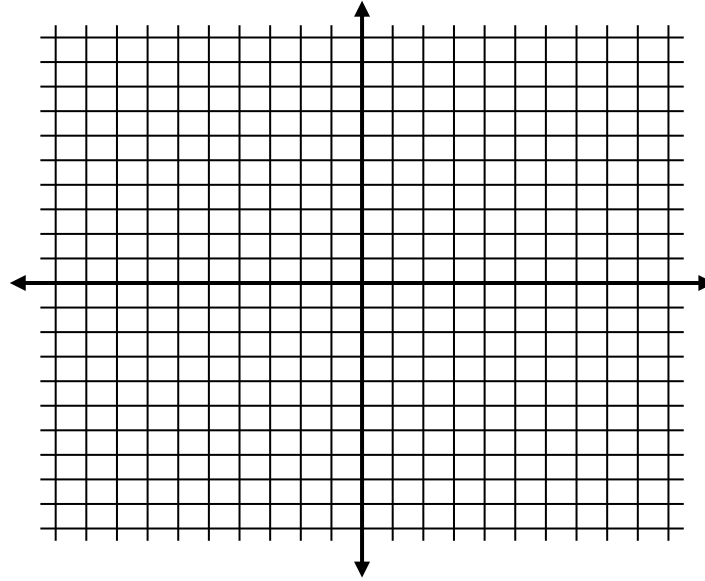
What is the maximum number of pencils you can buy?

Graph each inequality

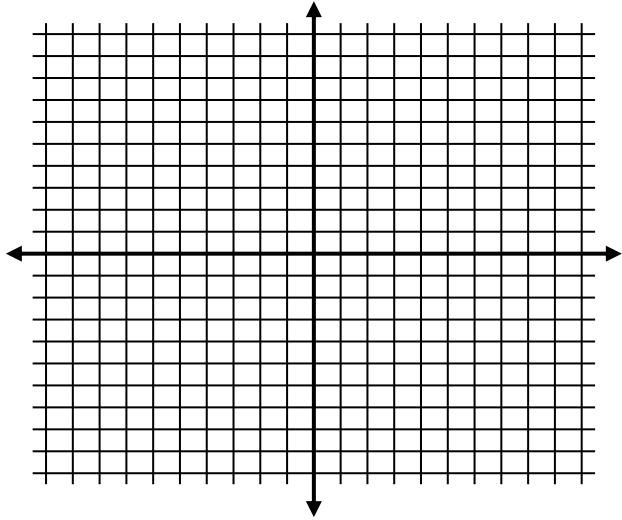
13. $-y < 2x - 3$



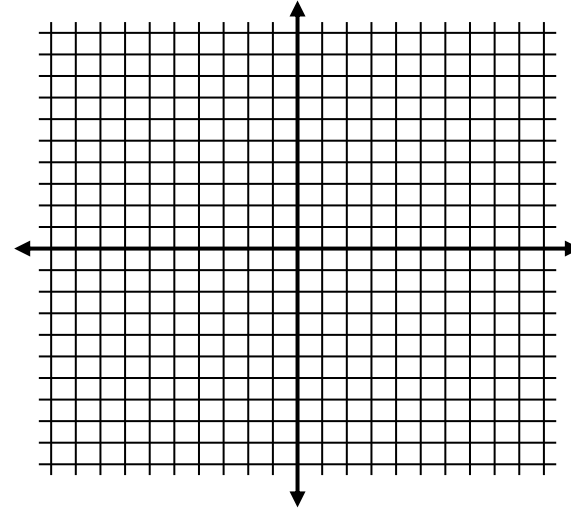
14. $2x + y \leq -4$



15. $-2y + 6x \geq 12$



16. $y < \frac{1}{2}x$



17. Your goal is go at least 120 miles in March by either jogging or walking. You can jog 12 mph and walk 6 mph.

Let x be the number of hours spent walking and y be the number of hours spent jogging. Write and graph an inequality to describe your goal in terms of x and y .

