

**Solving Inequalities**

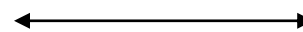
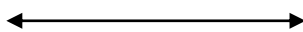
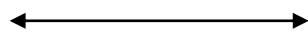
$<$	$\leq$	$>$	$\geq$
<ul style="list-style-type: none"> <li>• <u>less than</u></li> <li>• fewer than</li> </ul>	<ul style="list-style-type: none"> <li>• <u>less than or equal to</u></li> <li>• no more than</li> <li>• at most</li> </ul>	<ul style="list-style-type: none"> <li>• <u>greater than</u></li> <li>• more than</li> </ul>	<ul style="list-style-type: none"> <li>• <u>greater than or equal to</u></li> <li>• no less than</li> <li>• at least</li> </ul>

Solve and graph the following inequalities. Then write what the solution is using a complete sentence.

1.  $2x \geq 12$

2.  $8 + 3x \leq 2x$

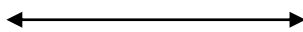
3.  $4x + 3 < -13$



4.  $7 - 3x \geq 22$

5.  $10 + 6x - 2x > 50$

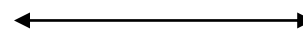
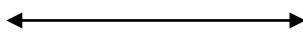
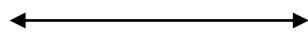
6.  $-2(x + 3) > -22$



7.  $\frac{2}{3}x > 10$

8.  $9 - 2x \leq 6x - 15$

9.  $6 + 3x \geq 12 - x$



Use each scenario to write an inequality that can be used to solve the situation, but DO NOT SOLVE!!

10. Fred, the farmer, has started a savings account for a tractor. He saved \$600 last month and plans to add \$100 each month until he has saved more than \$2000. Write an inequality in terms of the number of months,  $m$ , that he has to save for the tractor.
  
11. Gaby the gabber likes to text messages to her friends using her cell phone. She is charged \$0.10 each time she types a message plus \$50 for the phone plan. She is only allowed to have a bill that is at most \$60. Write an inequality in terms of the number of messages,  $m$ , that she can text each billing cycle.