Solving and Graphing One Variable Inequalities

The solution to an inequality is the set of values that make the inequality _____.

You solve an inequality very much like you would solve _____, except you have to keep in mind that some operations will _____ the inequality symbol. Anytime you _____, you must remember that it _____the relationship and you must _____ the inequality symbol.

Solve: $3(x-4)+2<14$

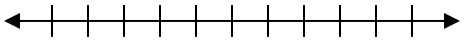
The value that you end up with when *x* is by itself is called the _____.

For < or > , you use a _____ dot.

(The value _____ included in the solution.)

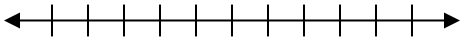
For ≤ or ≥ , you use a _____ dot.

(The value _____ included in the solution.)

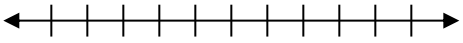


Solve the following inequalities and graph the solutions.

1. $5-4x\geq 25$



2. $-2(4x-5)<4-2(x+3)$



3. Keith has $500 in a savings account at the beginning of the summer. He wants to have at least $200 in the account by the end of the summer. He withdraws $25 a week for food, clothes, and movie tickets. Write an inequality that represents Keith's situation. How many weeks can Keith withdraw money from his account? Justify your answer.