

Solve Inequalities Using Multiplication and Division

Section 6.2

Math 2

Mr. Keltner

Multiplying and Dividing by Negatives

Whenever ya' multiply or divide by a negative, ya' gotta ***switch the symbol's direction.***

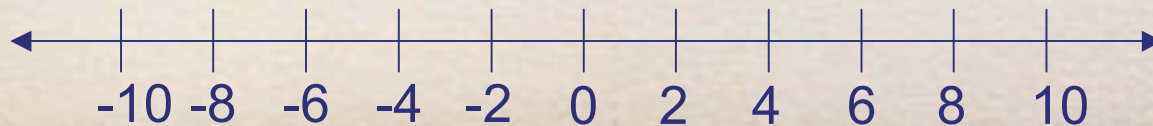


The reason's why is 'cuz you're taking the opposite of the number, so you also have to consider the ***opposite side of the number line.***

- When we use inverse operations to solve an inequality, sometimes we will need to multiply or divide by a negative value.
- ***When we multiply or divide by a negative value, we must reverse the direction of the inequality symbol.***

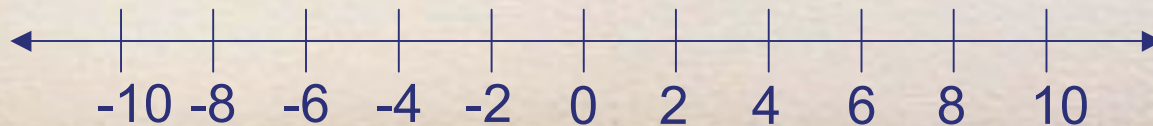
Example 1

- Solve $\frac{x}{4} \leq -2$. Then graph.



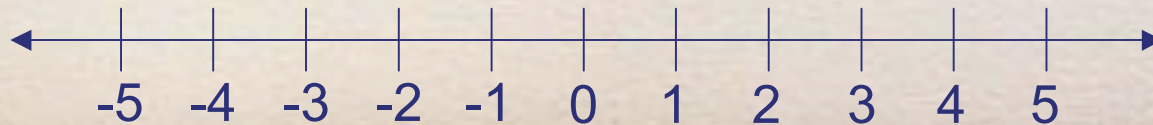
Example 2

- Solve $x/-3 > -2$, then graph.



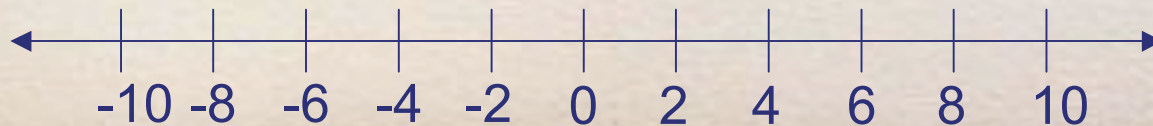
Example 3

- Solve $-6x \geq 18$, and graph.



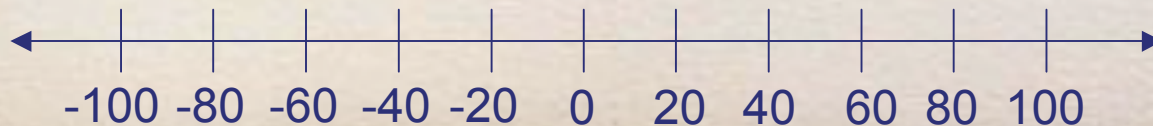
Example 4

- Solve $5x > 45$, and graph.



Example 5

- Write the verbal sentence as an inequality. Then solve and graph the inequality.
 - Twenty dollars of gas will probably will get my car less than 250 miles.
 - What does the variable represent?



Assessment

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#’s 4-32, all