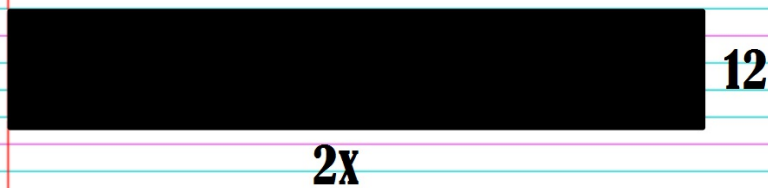


WARM UP:

1. Solve: $3(x - 12) = 2(x - 10)$

2. If the perimeter of the figure below is 48cm, what is the value of x?



Solving Multistep Inequalities

What is an Inequality? a mathematical statement that shows two sides/values are not equal

less than $<$



greater than $>$

less than or equal to \leq



greater than or equal to \geq

steps to follow:

1. Use distributive property if there are parenthesis. **DP**
2. Combine like terms on the left and right side of the inequality sign. **CLT**
3. Draw a box around the variable. **BOX**
4. If there is a variable on the left and the right side, move the variable on the right to the left using inverse operation. **MV**
5. Solve using inverse operations (2 step), when you multiply or divide by a negative number, the sign needs to be flipped. **IO**
6. Graph each answer. **GRAPH**
7. Check your answer. **CHECK**

Ex 1) $4x + 6 < 14$



Solution set:

EX 2) $2x - 3 - 8x \geq 21$



Solution set:

Ex 3) $7(2x - 4) - 12x > x + 12$



Solution set:

$$\text{Ex 4) } 3 + x - 9 \leq 2x + 10 + x$$

$$x \leq -8$$



Solution set:

Classwork: Whiteboard Activity

1. $5x - 3 - 8x \leq 9$

2. $5z + 3z - 4 > 4$

3. $2h + 7 \leq 3h + 1$

$$4. 1 + \frac{2}{3}x \geq \frac{x}{2}$$

$$7. 15(x - 3) + 3x < 45$$

$$5. 2x + 3 > 5x - 6$$

$$8. -2(6 + s) < -16 + 2s$$

$$6. 8x + 8 \geq 11x - 1$$

Challenge Problem:

A school's Spanish club is selling printed caps to raise money for a trip. The printer charges \$150 in advance plus \$3 for every cap ordered. If the club sells caps for \$12.50 each, at least how many caps do they need to sell to make a profit?

$x = \text{caps}$



Warm Up:

Solve, graph, and write the solution set.

1. $4(x + 6) - 8 \leq 2x + 12$

2. $38 - 2x > 44$

3. $6x + 13 \geq -10 + 5x$

CW A: Find a partner

You have 25 minutes to complete the matching activity.

Solve each inequality and match the correct graph with each answer.

CW B:

Choose your own Adventure

- **Read the directions**
- **Solve the problems**
- **Find out information about where in the world you are**