4.3

Solving Inequalities Using Multiplication & Division (Day 2)

Homework Change:

pp. 143-145

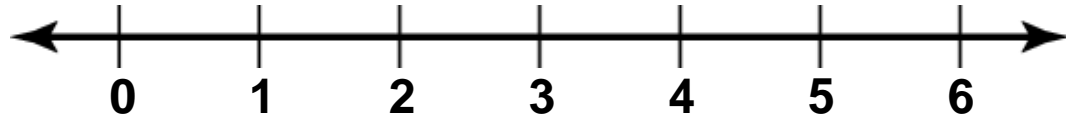(#19, 24, 27-35, 48-52)

& QUIZ <u>ON THE BLOCK CLASS</u>
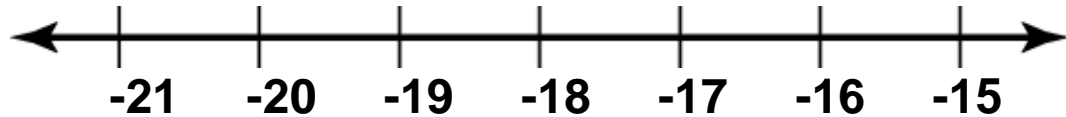
Solve and graph the following:

1) $9x > 36$

2) $-40 \geq 8k$

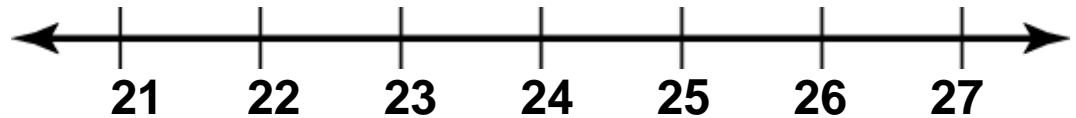**Solve and graph the following:**

3) $\quad -2 > \dfrac{n}{9}$

Number line: -21 -20 -19 -18 -17 -16 -15

4) $\quad \dfrac{3}{4}x \geq 18$

Number line: 21 22 23 24 25 26 27

Solving inequalities is just like solving regular equations…

Solve and graph the following:

$a) \quad \dfrac{x}{-3} > 2$
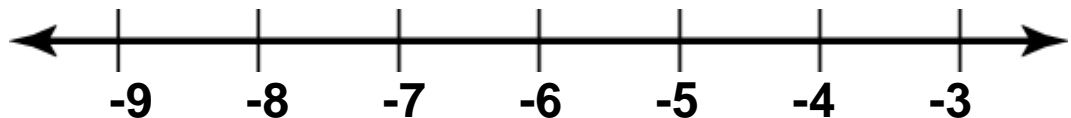
Solve and graph the following:

b) $\dfrac{w}{-7} \le -3$

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 ←——+———+———+———+———+———+———+——→
    18   19   20   21   22   23   24
```

c) $1.2 \le \dfrac{w}{-6}$

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 ←——+———+———+———+———+———+———+——→
   -10   -9   -8   -7   -6   -5   -4
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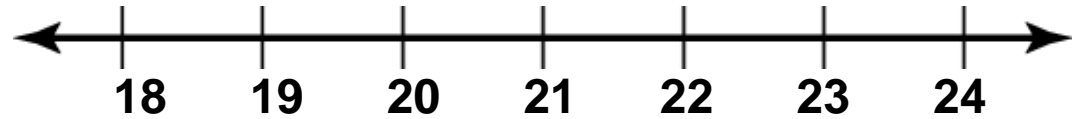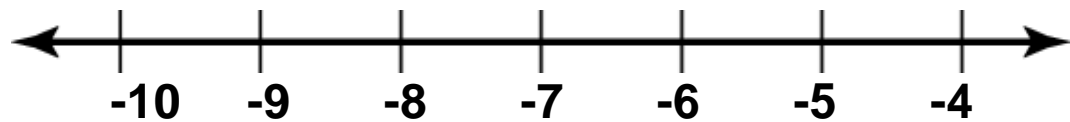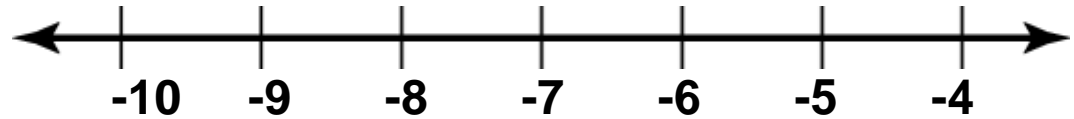
Solve and graph the following:

$d)\quad -8x > 56$

$e)\quad -12n \le -60$
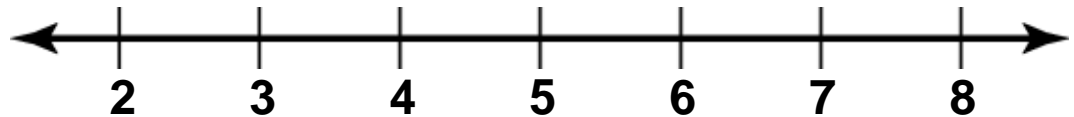
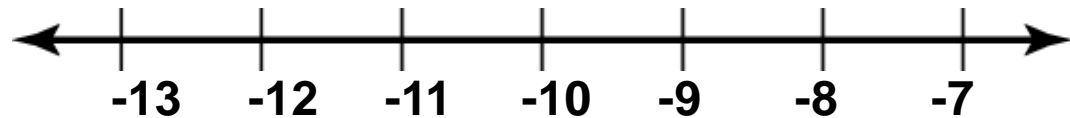**Solve and graph the following:**

e) $-2a < -9$

f) $-4.2 \leq -0.7t$

14) $12 \leq -\dfrac{6}{5}x$

-13   -12   -11   -10   -9   -8   -7
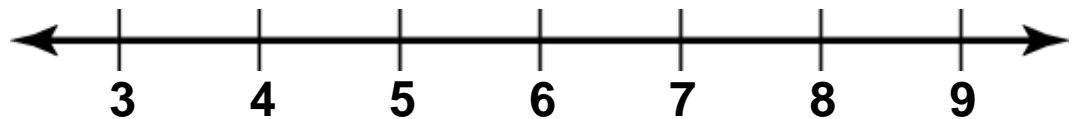
Inequalities

An **<u>inequality</u>** is a mathematical sentence that _____ _____.

To write an inequality, look for the following phrases to determine where to place the inequality symbol.

Inequality Symbols				
Symbol	**<**	**>**	**≤**	**≥**
Key Phrases	• is less than • is fewer than	• is greater than • is more than	• is less than or equal to • is at most • is no more than	• is greater than or equal to • is at least • is no less than

Writing Inequalities

Write the following as an inequality.

1) A number q plus a number is great than or equal to -7.9.

2) The product of a number m and 8 is at most -40.

3) The quotient of a number d and -7 is at least -10.

4) The difference of a number n and 1.5 is fewer than 45.

5) The sum of a number a and 7.8 is no more than 46.8.

6) 17 less than a number x is no less than 56.

Checking solutions

Tell whether -2 is a solution of each inequality. Show work.
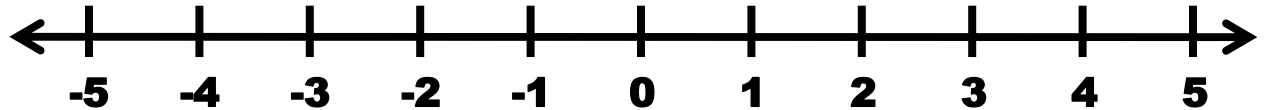
8) $x - 5 \geq -6$

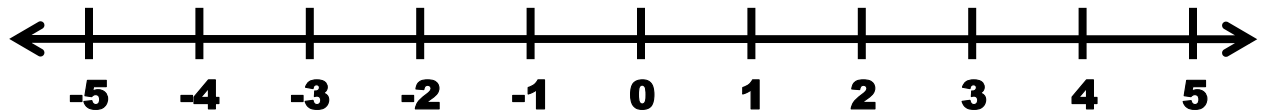9) $-5.5 < 14$

Solving Inequalities

Solving inequalities is just like solving regular equations…

Solve and graph the following:

10) $y - 3 \geq -5$
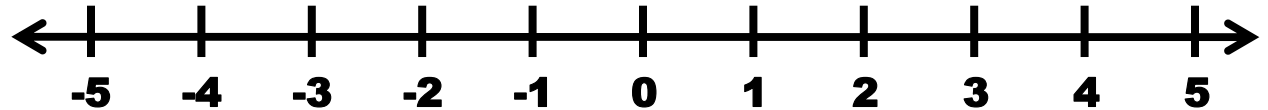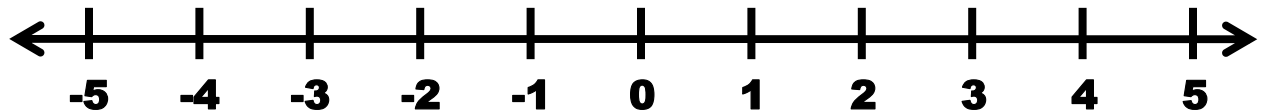

11) $14 \geq w + 11$

Solving Inequalities

Solving inequalities is just like solving regular equations…

Solve and graph the following:

12) $t - 4 < -4$

13) $-3.4 > c - 1.2$

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    (#19, 24, 27-35, 48-52)

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