Warmup 8/ **(# of letters in the alphabet)**

Distribute and simplify the following:

1. $\frac{2}{3}(3x - 9) - 5x + 2$

$2x - 6 - 5x + 2 \rightarrow \boxed{-3x - 4}$

$\frac{\cancel{3} \cdot 5}{\cancel{6} \cdot 7} = \frac{\cancel{30}}{\cancel{6}}$

2. $\frac{5}{6}(60x - 5) - (x - 2) + 5(x + 2)$

$\frac{5}{\cancel{6}} \cdot \cancel{60}^{10} \rightarrow 50$

$50x - 4\frac{1}{6} - x + 2 + 5x + 10$

$\downarrow$

$\boxed{54x + 7\frac{5}{6}}$

3. Multiply: $-\frac{\cancel{4}^{1}}{\cancel{5}_{1}} \cdot \frac{\cancel{25}^{5}}{\cancel{44}_{11}}$

$\boxed{-\frac{5}{11}}$

pg. 89 (11-23)

11.

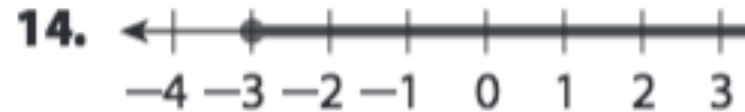$$x \leq -2 \text{ OR } x \geq 7$$

12.

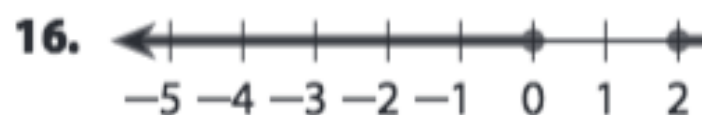$$-8 < x \leq -1$$

13.

$$x < 9 \text{ OR } x > 11$$

14.

$$-3 \leq x < 6$$

15.

$$2 < x < 10$$

16.
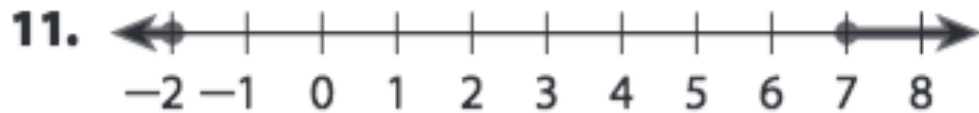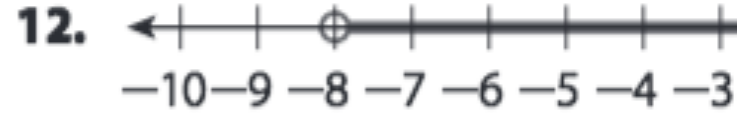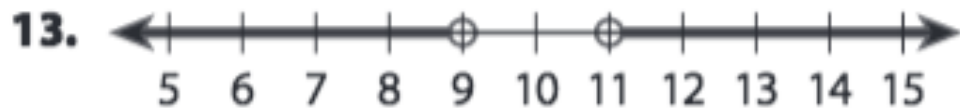
$$x \leq 0 \text{ OR } x \geq 2$$

17. Biology An iguana needs to live in a warm environment. The temperature in a pet iguana's cage should be between 70 °F and 95 °F, inclusive.


$$70 \leq t \leq 95$$

18. Meteorology One layer of Earth's atmosphere is called the stratosphere. At one point above Earth's surface, the stratosphere extends from an altitude of 16 kilometers to an altitude of 50 kilometers.

$$16 \leq k \leq 50$$

19. Music A typical acoustic guitar has a range of three octaves. When the guitar is tuned to "concert pitch," the range of frequencies for those three octaves is between 82.4 Hertz and 659.2 Hertz inclusive.
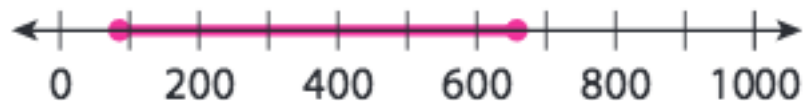
$82.4 \leq f \leq 659.2$

20. Transportation The cruise-control function on Georgina's car should keep the speed of the car within 3 miles per hour of the set speed. The set speed is 55 miles per hour.
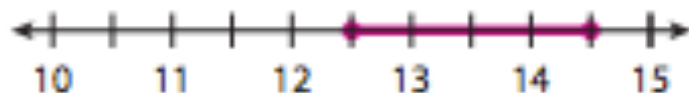

$52 \leq s \leq 58$

21. Chemistry Water is not a liquid if its temperature is above 100 °C or below 0 °C.

$x < 0 \text{ or } x > 100$

22. Sports The ball used in a soccer game may not weigh more than 16 ounces or less than 14 ounces at the start of the match. After 1.5 ounces of air were added to a ball, the ball was approved for use in a game.

$$12.5 \le w \le 14.5$$

23. Match the compound inequalities with the graphs of their solutions.

A. $-26 < 6x - 8 < 16$
$-18 < 6x < 24$
$-3 < x < 4$

___C___

B. $-\dfrac{1}{3} \le \dfrac{x+2}{3} \le 2$
$-1 \le x + 2 \le 6$
$-3 \le x \le 4$

___A___

C. $4x + 1 < -11$ OR $\dfrac{x}{2} - 5 > -3$
$4x < -12 \qquad \dfrac{x}{2} > 2$
$x < -3 \qquad x > 4$

___D___
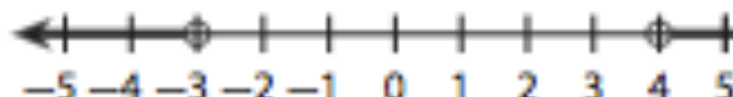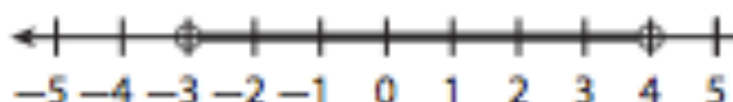

D. $\dfrac{x-6}{3} \le -3$ OR $2x + 8 \ge 16$
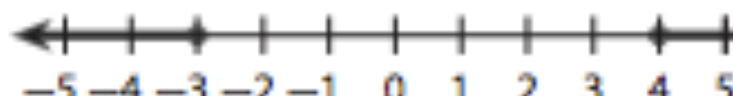$x - 6 \le -9 \qquad 2x \ge 8$
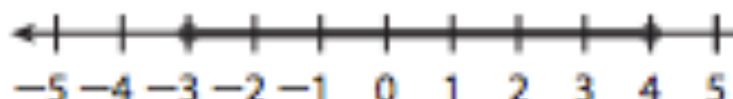$x \le -3 \qquad x \ge 4$

___B___

Quiz Tomorrow!!!

○ **Solving Inequalities**

○ **Graphing Solutions of Inequalities**

○ **Setting up Inequalities from Story Problems**

○ **Compound Inequalities/difference between AND and OR**

With elbow partner: work on story pr worksheet

- ○ **Stay together, don't work ahead of your partner**
- ○ **Help each other understand!!!**
- ○ **Don't ask me a question unless you <u>both</u> have that q**

10-15 minutes: do corrections on p.78 homework

- (If you made no mistakes, try 11-12 or 19-20!!!)

Due tomorrow: Inequalities Revie

- Same deal as last time: the answer key will be posted on my w

- You are expected to log on and grade your work in a different

- If you fix your errors and rework the problems in a different get to count it correct when we put a grade on it