Bell Ringer

Section 2.6

What value of *a* makes the equation an identity? Explain your reasoning.

Not Possible

1. $3a(x - 4) = 8x - 16$

$3ax - 12a = 8x - 16$

$3(8) - 12(8)$

2. $10x + 7 - 4ax = 4ax + 3a$

$+4ax \quad +4ax$

$10x + 7 = 8ax + 3a$

$a(8x + 3)$

3. $3x - 2 = 10x - 14 + 2a$

4. $7x + 9 - 2ax = 6ax + a$

WHITEBOARD REVIEW

Tues - Abs Val Ineq.
Wed - Rev
Thurs - Test

Solve for x

$2(4x + 2) = 4x - 12(x - 1)$

$8x + 4 = 4x - 12x + 12$

$-4 \quad\quad -4$

$8x = -8x + 8$

$+8x \quad +8x$

$\frac{16x}{16} = \frac{8}{16} \quad x = \frac{1}{2}$

Solve for y

$12y + 6 = 6(2y + 1)$

$12y + 6 = 12y + 6$

$-12y \quad -12y$

$6 = 6 \rightarrow$ True

∞ sol

Solve for b

$|4b - 5| - 10 = 20$

$+10 \quad +10$

$|4b-5| = 30$

$4b-5=30$

$\frac{4b}{4} = \frac{35}{4}$

$4b-5=-30$

$+5 \quad +5$

$\frac{4b}{4} = \frac{-25}{4}$

Solve for x

$|2x + 3| = -1$

No sol

Solve for h

$|3h + 1| = 7h$

$= -\frac{7}{10}$

$3h+1=7h$

$-3h \quad -3h$

$1=4h$

$\frac{1}{4} \quad \frac{4h}{4}$

$h=\frac{1}{4}$

$3h+1=-7h$

$-3h \quad -3h$

$1=-10h$

$\frac{1}{-10} \quad \frac{-10h}{-10}$

$-\frac{1}{10}=h$

Solve for x

$4x - 16y - 2 = 18 + 16y$

$+16y \quad +2 \quad +2$

$\frac{4x}{4} = \frac{20}{4} + \frac{16y}{4}$

$x = 5 + 4y$

Solve the volume of a cylinder formula for h

$$V = \pi r^2 h$$

$$h = \frac{V}{\pi r^2}$$

$$\frac{339}{9\pi} \approx 11.98 \approx 12 \text{ in}$$

do this too...!

A cylinder has a volume of 339 cubic feet and a radius of 3 ft. What is the height of the cylinder rounded to the nearest inch??

Solve the inequality

$7 - 8y > -9$

$-7 \quad -7$

$\frac{-8y}{-8} > \frac{-16}{-8}$

$y < 2$

Solve the inequality
Give answer in interval notation

$$-12 < 2x + 8 < 18$$

$-8 \quad -8 \quad -8$

$$-20 < 2x < 10$$

$$-10 < x < 5$$

Solve the inequality

$|a| < 12$

$-12 < a < 12$

Solve the inequality

$|b| > 2$

$b > 2$ or

$b < -2$

Solve the inequality

$|x - 5| > 11$

$x - 5 > 11$ or $x - 5 < -11$

$+5 \quad +5 \qquad\qquad +5 \quad +5$

$x > 16$ or $x < -6$

Solve the inequality

$|2x + 1| < 7$

$-7 < 2x + 1 < 7$

$-1 \quad -1 \quad -1$

$-8 < 2x < 6$

$-4 < x < 3$

$x < 3$ and $x > -4$

Solve the inequality

$$|3j - 1| + 6 > 0$$

$|3j-1| > -6$

∞ sol

Solve the inequality

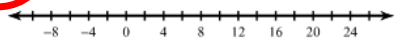
$$|3j - 1| + 6 > 0$$

Ch 1 and 2 Test Thursday!

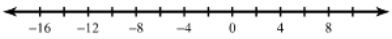
Absolute Value Inequalities Name_____

Solve each inequality and graph its solution.

1) $|x - 8| < 15$

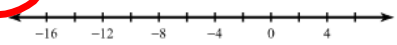


2) $|x + 2| < 12$

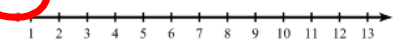


shorten...?

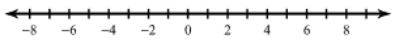
3) $|v + 5| \leq 10$



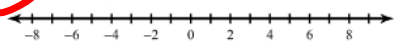
4) $|-7 + v| \leq 4$



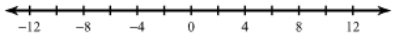
5) $|-x + 1| \leq 7$



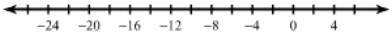
6) $|9x - 1| \geq 46$



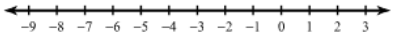
7) $|-8n + 8| < 88$



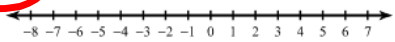
8) $|r + 9| \leq 14$



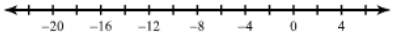
9) $\frac{|9b|}{2} \leq 4$



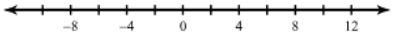
10) $|4n| + 6 > 22$



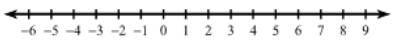
11) $\frac{|x+9|}{3} \leq 4$



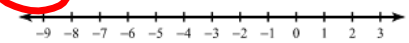
12) $8 + |-2k| < 28$



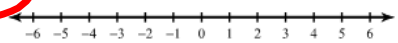
13) $-2 + |10p - 6| < 62$



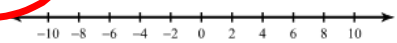
14) $4|7 + 7r| \leq 28$



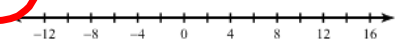
15) $10|8x + 2| \geq 100$



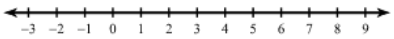
16) $2|5 - 9n| \geq 118$



17) $|8 - 10b| - 7 > 101$



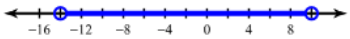
18) $5|5 - 5p| + 3 \leq 28$



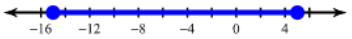
Answers to Absolute Value Inequalities

1) $-7 < x < 23$:

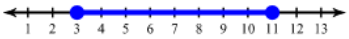
2) $-14 < x < 10$:



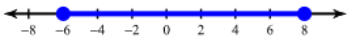
3) $-15 \le v \le 5$:



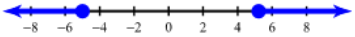
4) $3 \le v \le 11$:



5) $-6 \le x \le 8$:

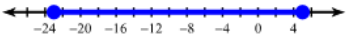


6) $x \ge \frac{47}{9}$ or $x \le -5$:

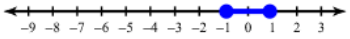


7) $-10 < n < 12$:

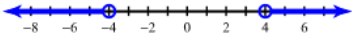
8) $-23 \le r \le 5$:



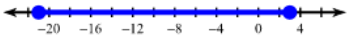
9) $-\frac{8}{9} \le b \le \frac{8}{9}$:



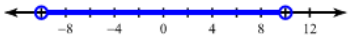
10) $n > 4$ or $n < -4$:



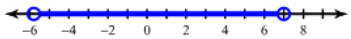
11) $-21 \le x \le 3$:



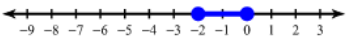
12) $-10 < k < 10$:



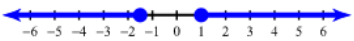
13) $-\frac{29}{5} < p < 7$:



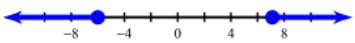
14) $-2 \le r \le 0$:



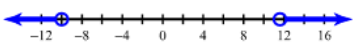
15) $x \ge 1$ or $x \le -\frac{3}{2}$:



16) $n \le -6$ or $n \ge \frac{64}{9}$:



17) $b < -10$ or $b > \frac{58}{5}$:



18) $0 \le p \le 2$: