SM2 HW 10-1 (Review Unit 1)   Date_____ Period____

Solve each equation. Show your work.

1) $x + 4 - 4x = -20$

2) $-5n + 7 + 4 = 21$

3) $8 + 4x = 4x + 8 - 5$

4) $7 - 7m + 3m + 13 = 2m - m$

5) $84 = -6(4 + 3x)$

6) $-119 = -5(7x + 7) - 7x$

7) The perimeter of a rectangle is 45 feet. The length is 12 feet. What is the width?

8) The perimeter of a rectangal is given by the following formula:
$P = 2W + 2L$

Solve for W

9) The area of a trapezoid is given by the following formula. Solve for h
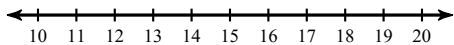$$A = \frac{1}{2}h(b_1 + b_2)$$

10) The area of a trapezoid is given by the following formula. Solve for b_1:
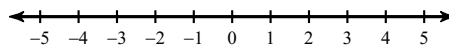$$A = \frac{1}{2}h(b_1 + b_2)$$

11) The radius of a circle is 12π meters. What is the circumference?

12) The area of a trapezoid is 255 square feet. If one base is 9 feet and other base is twice as long, what is the height?

13) The area of a trapezoid is 300 square feet. If the height is 12 feet and one base is 14 feet, what is the other base?

14) If you drive at 60 miles per hour for 2.7 hours, how far did you go?

For all problems: write the solution to the inequality ("one step then rewrite") as (a) a simplified inequality, (b) interval notation, and (c) a number line graph.
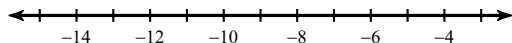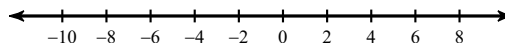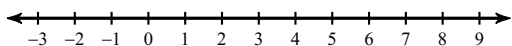
15) $3x + 3x > 6x + 2$

10 11 12 13 14 15 16 17 18 19 20

16) $33 < 3(2 + 3v)$

−5 −4 −3 −2 −1 0 1 2 3 4 5

17) $x - 7 \le -16$ or $x + 1 \ge -6$

−14   −12   −10   −8   −6   −4

18) $-10 < k - 2 < 6$

−10 −8 −6 −4 −2 0 2 4 6 8

19) $5 + x \le 12$ and $x - 5 > -7$

−3 −2 −1 0 1 2 3 4 5 6 7 8 9

Solve each equation.

20) $\left|v + 1\right| + 9 = 18$

21) $9\left|9 + x\right| = 27$

Solve each inequality and graph its solution.

22) $3\left|n + 10\right| + 8 \ge 53$

−28 −24 −20 −16 −12 −8 −4 0 4 8

23) $4 - 9\left|k - 3\right| > -113$

−12   −8   −4   0   4   8   12   16

24) $8\left|1 + x\right| + 1 \ge 17$

−7 −6 −5 −4 −3 −2 −1 0 1 2 3 4 5 6
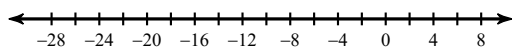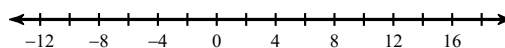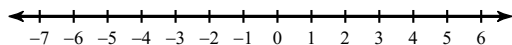
25) What property is shown below?

$5 \div 5 = 1$

26) What property is shown below?

$3 + (-3) = 0$

27) What property is shown below?

$\dfrac{3}{3} * \dfrac{2}{5} \rightarrow \dfrac{6}{15}$