Math-2   Name_____ ID: 1

SM2 HW #1-6 (Unit 1 Test Preview HW)   Date_____ Period_____

Solve each equation.

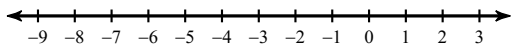1) $|n - 10| = 12$ 2) $|-1 + b| = 4$
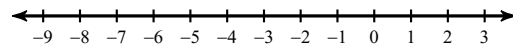
3) $|n - 3| = 5$ 4) $|p - 3| = -1$

Write the solution to the inequality in: (a) Simplified inequality notation, (b) Interval notation then (c) graph the solution.
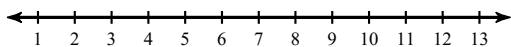
5) $|n + 3| \le 2$

6) $|x + 4| \le 4$
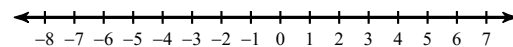

7) $|b - 8| < 2$

8) $|6n| > 18$

Solve each equation. Show your work.

9) $10 = v - 4 - 8v$ 10) $-16 = -2n - 6n$

11) $0 = -3a + 3a$ 12) $-14 = -6x - 8x$

13) $-4n - 7(1 + 6n) = 361$ 14) $4x - 4(2 - 4x) = -128$

15) $-12 + 6x = 6(3 + 6x)$

16) $-520 = -8(1 - 8r)$

17) Match the Properties to the correct examples of those properties:

(a) $4 - 4 = 0$ (1) Distributive Property

(b) $5 \cdot 0 = 0$ (2) Identity Property. Of Multiplication

(c) $6 \cdot 1 = 6$ (3) Inverse Property of Addition

(d) $5 \cdot \dfrac{1}{5} = 1$ (4) Inverse Property of Multiplication

18) Define what a solution to an equation means.

19) a) What error has been made?

$4 - (2x + 5) \rightarrow -8x - 20$

b) Write the correct equivalent expression of $4 - (2x + 5)$

20) Is the letter in the inequality a variable or an unknown value? Justify your answer.

$x > 2$

21) Solve for 'x'

$2x - 5y = 9$

22) Solve for 'x'

$2x + 3y = 4x - 8y$

23) The area of a rectangle is 375 square meters. If the width is 22.5 meters:

a) What is the length

b) What is the perimeter?

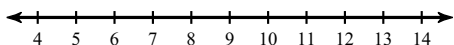24) The area of a trapezoid is given by the following formula:

$A = \dfrac{1}{2}h(b_1 + b_2)$ Solve for b_1 (one step rewrite)

25) The area of a trapezoid is 275 square feet. If the height is 11 feet and one base is 12 feet, what is the other base?
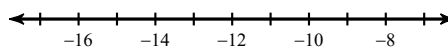
26) The circumference of a circle is 27.5 meters. What is the diameter? Use $\pi =$ 3.14. Round to the nearest 1/10th (1st decimal place).

Write the solution to the inequality in: (a) Simplified inequality notation, (b) Interval notation then (c) graph the solution.
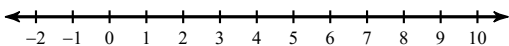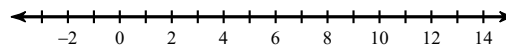
27) $4(k + 9) < 68$

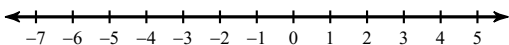4 5 6 7 8 9 10 11 12 13 14

28) $\dfrac{8 + r}{3} > -2$

−16   −14   −12   −10   −8

29) $0 \le \dfrac{p}{5} < 1$

−2 −1 0 1 2 3 4 5 6 7 8 9 10

30) $\dfrac{n}{5} > 2$ or $n + 4 < 4$

−2   0   2   4   6   8   10   12   14

31) $-5 \le x - 2 < 1$

−7 −6 −5 −4 −3 −2 −1 0 1 2 3 4 5

32) $n - 9 \ge -4$ or $n - 1 \ge -9$

−14   −12   −10   −8   −6   −4   −2