Name:_____ **UNIT 2 Review-HW#____** Date:_____

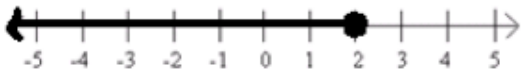
1. Find the solution of the equation $3(x+3)=12$	2. Find the solution of the equation $\frac{x}{4}+7=5$
3. Find the solution of the equation $4(2x+1)=27+3(2x-5)$?	**4.** Find the solution of the equation $\frac{12}{x}=\frac{3}{8}$
5. Find the solution of the equation $2(x-3)=1.2-x$	6. Which value of p is the solution of $5p-1=2p+20$?
7. Solve for n: $\frac{3}{2}n-4=5$	**8.** Find the solution of the equation $5x-(x+2)=10$

9. Which operation would you apply first to solve $\frac{1}{2}(x+3) = -11$?

1. addition
2. multiplication
3. subtraction
4. division

10. Find all negative odd integers that satisfy the following inequality: $-3x+1 \leq 17$

11. Here is the graphical representation of a set of real numbers:



a. Describe this set of real numbers in words.

b. Describe this set of real numbers in set notation.

12. Solve and graph the inequality:

$$2x - 3 \geq -5$$

13. Solve and graph the inequality:

$$-x \geq 4$$

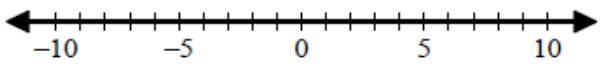
14. Solve and graph the inequality. Express the solution set as a compound inequality.

$$-3 < x - 1 \leq 2$$

15. Solve and graph the inequality. Express the solution set as a compound inequality.

$$(-x \geq 2) \text{ or } (x > 0)$$

16. Solve and graph: $x+5 \leq 7$ and $-6x < 24$



17. The solution set of which inequality is shown in the graph below?

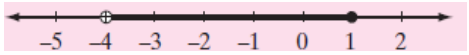
1) $x-2\geq 0$

2) $x-2>0$

3) $x-2<0$

4) $x-2\leq 0$

18. The graph below shows the solution set of which inequality?



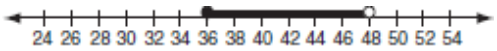
1) $-4<x<1$

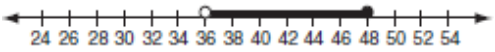
2) $-4\leq x<1$

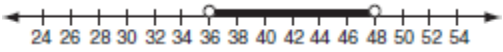
3) $-4<x\leq 1$

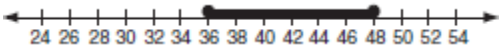
4) $-4\leq x\leq 1$

19. In order to be admitted for a certain ride at an amusement park, a child must be greater than or equal to 36 inches tall and less than 48 inches tall. Which graph represents these conditions?

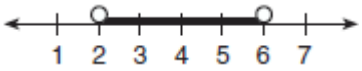
1) 

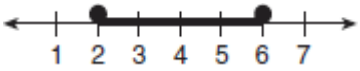
2) 

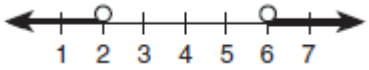
3) 

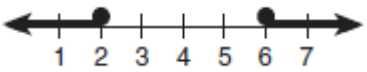
4) 

20. Which graph represents the solution set for $2x-4\leq 8$ and $x+5\geq 7$?

1) 

2) 

3) 

4) 

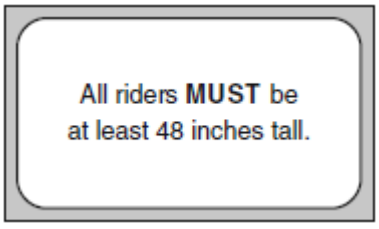
21. The sign shown below is posted in front of a roller coaster ride at the Wadsworth County Fairgrounds. If *h* represents the height of a rider in inches, what is a correct translation of the statement on this sign?

1) $h<48$

2) $h>48$

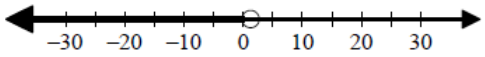
3) $h\leq 48$

4) $h\geq 48$

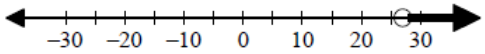


22. Solve for the inequality and graph the solution on the number line $\frac{2}{9}x > 6$.

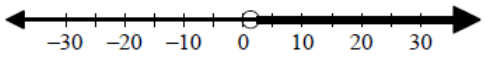
[A] $x<1.3$



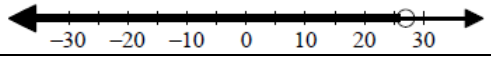
[B] $x>27$



[C] $x>1.3$

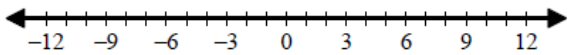


[D] $x<27$



23. Solve and graph the following inequality:

$$\frac{2x+4}{5} > 4$$



24. The formula for converting temperature in degrees Fahrenheit is $F=\frac{9}{5}C+32$. If the temperature is 20°C, what is the temperature in degrees Fahrenheit?

25. Solve for y: k(y + f) = h

26. If $c = 2m + d$, then m is equal to

27. If $x = 2a - b^2$, what is the value of a?

28. What is the value of x if $2ax + 7x = 6a + 21$

29. Which of the following is equivalent to the equation $4r + 7s = q$?

a. $r = 4q - 28s$

b. $r = \frac{q - 7s}{4}$

c. $s = 7q + 28r$

d. $s = \frac{q + 4r}{7}$

30. An example of an algebraic expression is

1) $x + 2$

2) $y = x + 2$

3) $y < x + 2$

4) $y = x^2 + 2x$

31.

Compare the quantities in Column A and Column B.

Column A	Column B
the value of x for which the denominator of $y = \frac{x}{x-8}$ is zero	the value of x for which the denominator of $y = \frac{x}{8-x}$ is zero

[A] The quantity in Column A is greater.
[B] The quantity in Column B is greater.
[C] The quantities are equal.
[D] The relationship cannot be determined from the information given.

32. Which value of x makes the expression $\frac{x+4}{x-3}$ undefined?

33. If the length of one side of a square is represented as $n-4$, determine its area.

1) $n - 16$

2) $4n - 16$

3) $n^2 - 8n + 16$

4) $n^4 - 16$

34. When $3a^2 - 2a + 5$ is subtracted from $a^2 + a - 1$, the result is

(1) $2a^2 - 3a + 6$

(2) $-2a^2 + 3a - 6$

(3) $2a^2 - 3a - 6$

(4) $-2a^2 + 3a + 6$

35. Express both the perimeter and the area of the rectangle shown in the accompanying diagram as polynomials in simplest form.