7.2 Solve Inequalities

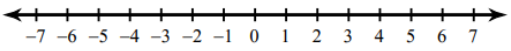
NOTES

MATH 7

Write your questions here!

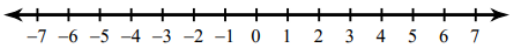
Equation

$2x + 1 = 9$



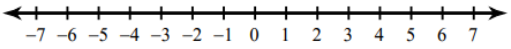
Inequality

$2x + 1 > 9$

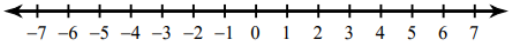


Solve the inequality and graph the solution set on the number line.

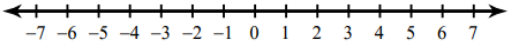
$3x - 5 \geq -8$



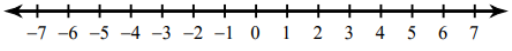
$4 > \frac{y}{3} + 6$



$11 \leq 5 + 2t$



$\frac{4n + 2}{9} \neq 2$



SELECT ALL values of x makes $4x - 1 > 11$ a true statement?

(A) $x = 2$

(B) $x = 3$

(C) $x = 4$

(D) $x = 5$

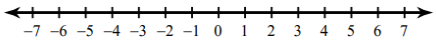
SUMMARY:

Now, summarize your notes here!

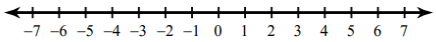
PRACTICE

Solve the following inequalities and graph the solution set on the number line.

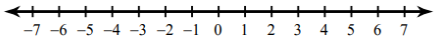
1. $3x + 5 > -1$



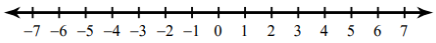
2. $-6 \leq 2y + 4$



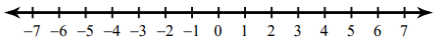
3. $\frac{h}{3} - 5 < -7$



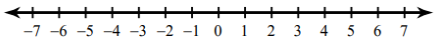
4. $x + 5 > 2$



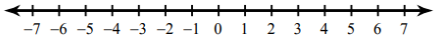
5. $-12 \leq 3g$



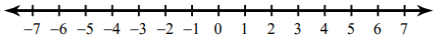
6. $\frac{2}{3}t + 4 < 2$



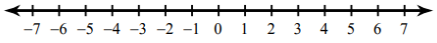
7. $7 \leq 3n + 5 + 2$



8. $2(b + 4) \geq 10$

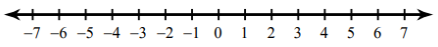


9. $3p + 4 \neq 13$

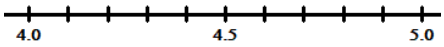


Solve the following inequalities and graph the solution set on the number line.

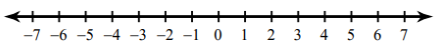
10. $3 > \frac{2x+3}{5}$



11. $3.1 + 2.5m \leq 13.6$



12. $3(2h + 1) - 4 < 23$



SELECT ALL

13. Select all values of x that make $4x + 3 \leq 11$ a true statement.

(A) $x = 0$

(B) $x = 1$

(C) $x = 2$

(D) $x = 3$

14. Select all values of n that make $\frac{n}{2} + 5 > 7$ a true statement.

(A) $n = 2$

(B) $n = 4$

(C) $n = 6$

(D) $n = 8$

15. Select all values of x that make $-11 \geq 3x + 4$ a true statement.

(A) $x = -3$

(B) $x = -4$

(C) $x = -5$

(D) $x = -6$

16. Select all values of y that make $\frac{1}{3}y - 5 \neq -3$ a true statement.

(A) $y = -3$

(B) $y = 0$

(C) $y = 3$

(D) $y = 6$

Translate to an inequality.

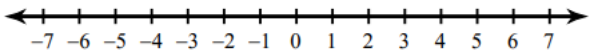
17. The quotient of a number d and four is greater than six.

18. The sum of 5 and a number n is less than or equal to 7.

19. Twice a number increased by two is at least twelve.

1. Solve the inequality and graph the solution set on the number line.

. $3x + 5 \geq -13$



2. Select all values of x that make $8 + \frac{1}{3}x < 5$ a true statement.

(A) $x = -3$

(B) $x = -6$

(C) $x = -9$

(D) $x = -12$

3. The perimeter of the rectangle shown below is less than 48 feet.

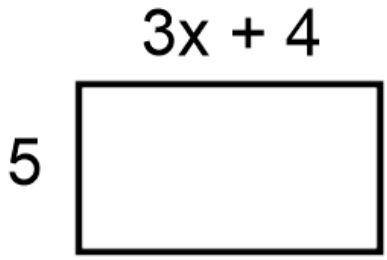
Part A
Which inequality represents the perimeter of the rectangle?

(A) $5 + 3x + 4 < 48$

(B) $5 + 3x + 4 > 48$

(C) $10 + 6x + 8 < 48$

(D) $10 + 6x + 8 > 48$



PART B
Solve the inequality.

PART C
Which of the following are possible values of x that would make the inequality true?

$x = 2$ $x = 8$ $x = 5$ $x = 3$

EXIT TICKET –

Write an inequality for each situation and give two possible values that make the inequality true.

a. Donuts cost 2 dollars each. Ted spent less than 20 dollars. How many donuts did Ted buy?

Inequality: Two possible solutions:

b. Keri has 8 dollars. She makes 3 dollars every hour she works. Keri has more than 50 dollars. How many hours did she work?

Inequality: Two possible solutions: