

NAME _____ DATE _____ PER. _____

Review – Inequalities

Solve each inequality and graph the solution.

1. $x + 3 < 10$



2. $-18 < -6x$



3. $\frac{x}{-3} \geq 3$



4. $-2(x + 5) < 8$



5. $-3 < 2x + 5$



6. $9 - 3x > -9$



7. $3 + \frac{2}{7}x > 4$



8. $-3(2 - x) \geq 6(x + 1)$



Write an inequality and solve.

9. Tammy wants to run at least 10 miles per week. So far this week she ran 4.5 miles. How many more miles must Tammy run this week to reach her goal?

10. What are the possible numbers of notebooks costing \$1.39 that can be purchased with \$10?

11. Car rental company A charges \$45 a day to rent a certain car. Car rental B charges \$30 a day plus \$0.20 per mile to rent a similar car. For how many miles is the cost at car rental Company B more than the cost at car rental company A for a one day rental?

12. Hannah has a saving account with a balance of \$210 and deposits \$15 per month. Faith has a savings account with a balance of \$175 and deposits \$20 per month. How many months will it take Hannah's account balance to be less than Faith's account balance?

13. Jill is playing in a basketball tournament and scored 24 points in her first game. If she averages over 20 points for both games she will receive a trophy. How many points can Jill score in the 2nd game and receive a trophy?

14. Which of the following is NOT a solution of $7 - 2m \geq 19$?

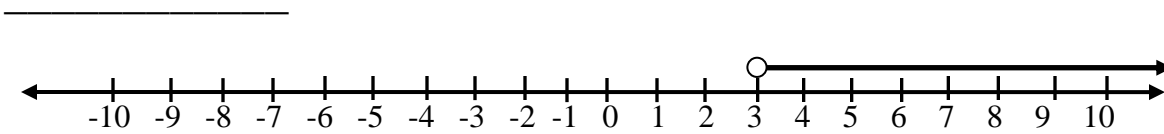
A. -2

C. -10

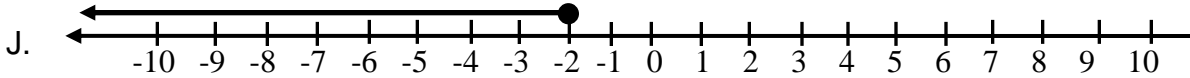
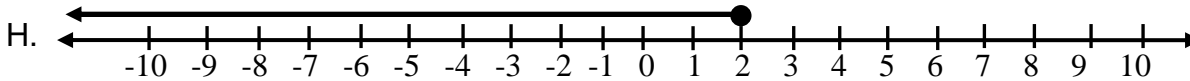
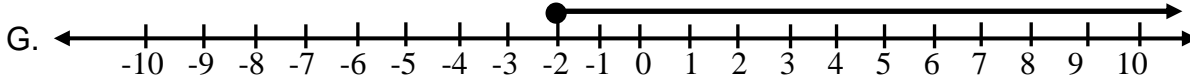
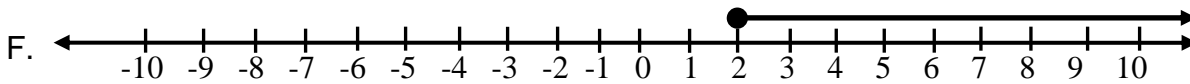
B. -6

D. -7

15. Write an inequality that represents the graph below.



16. Which is the graph of $-5h + 3 \leq -7$?



17. Write an inequality that represents all the values of x for $y \leq -4(x - 13) - 2$ when $y = 38$.

REVIEW. Solve each of the following.

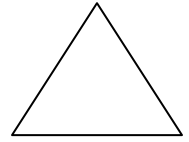
18. The length of a rectangle is 4 mm less than 3 times the width. If the perimeter is 56 mm, what is the length of the rectangle?

Equation: _____



19. In a triangle the longest side is 4 inches shorter than three times the shortest side. The third side is 5 inches more than the shortest side. If the perimeter of the triangle is 36 inches, find the length of the third side.

Equation: _____



20. Which situation is best represented by the equation $x - 40 = 15$?

A. Katie bought a bag of candy that contained 40 pieces. She ate 15 pieces of candy from the bag. How many pieces of candy are left in the bag?

B. Preston took 40 pieces of candy from a bag of candy that contained x pieces. There were 15 pieces of candy left in the bag. How many pieces of candy did the bag contain originally?

C. Andrew has 40 pieces of candy. Kevin had 15 less pieces of candy than Andrew. How many pieces of candy does Kevin have?

D. Teniesha has 40 pieces of candy. Carolyn has 15 fewer pieces of candy. How many pieces of candy does Carolyn have?

21. The ratio of skateboarders to bikers in an extreme sports contest is 7:2. There are 91 skateboarders. How many bikers are there?

Equation: _____

22. A number decreased by 35% of that number is 32.49. Find the number, rounded to the nearest hundredth.

Equation: _____

23. Polly bought a new pair of jeans for \$37.83 including the tax. If the tax rate was 8.25%, what was the original price of the jeans?

Equation: _____

24. To rent a car from The Car Rental Place Juan must pay \$20 plus an additional \$1.50 per mile that he drives. If Juan has a total of \$350 to spend on renting a car, how many miles can he afford to drive it?

Equation: _____

25. Find x for $5(x - 1) = 2(x - 4) - 6$

26. If $-12 + x = 7$, find the value of $4x - 2$.

27. Solve: $5(x + 2) - 7 = 5x + 3$

28. Simplify: $2x - 3(x - 4)$

Answers in random order: $x < 7$, $x > 3$, $x \leq 7$, $x \geq 5.5$, $x < 3$, F

$x > -9$, $x \leq -4$, $x < 6$, $x > 7$, $x \leq -9$,

$x > -4$, $x > 16$, $x > \frac{7}{2}$, $x > 75$, A, $-x + 12$, 26

-3, 34.95, B, 220, 12, 49.98, 20, all real numbers, 74, $x \leq 3$