

**TERM I REVIEW**

NAME \_\_\_\_\_

Date \_\_\_\_\_ Period \_\_\_\_\_

1. Evaluate  $\frac{mn}{m+n}$  when  $m = 8$  and  $n = 12$ .
2. Evaluate  $\frac{y}{2x} - z$  for  $x = 2$ ,  $y = 12$ , and  $z = 2$ .
3. Evaluate  $2y^2(x+y)$  when  $x = 8$  and  $y = 4$ .

Simplify:

4.  $|13|$
5.  $(-4)^2$

Evaluate:

6.  $(5e - 4f)^2$  when  $e = 3$  and  $f = 3$ .
7.  $\frac{x}{y}$  for  $x = -\frac{2}{9}$  and  $y = -\frac{2}{10}$
8. Add:  $\begin{bmatrix} 2 & -1 \\ 3 & 7 \end{bmatrix} + \begin{bmatrix} 5 & 4 \\ -9 & -8 \end{bmatrix}$
9. Subtract:  $\begin{bmatrix} 2 & 6 \\ 2 & -4 \end{bmatrix} - \begin{bmatrix} -6 & -7 \\ 1 & -5 \end{bmatrix}$

Solve:

10.  $x + 5 = 7$
11.  $\frac{5}{2}x = 20$
12. Use a calculator to solve the equation  $2.5x = 12.4$ .

Solve:

13.  $8x + 8 = 80$
14.  $4x + 5 = 37$  [A] 42 [B] 32 [C] 8 [D] 7
15.  $\frac{5}{6}y - 4 = 6$  [A] 12 [B] 14 [C]  $2\frac{2}{5}$  [D]  $8\frac{1}{3}$
16.  $8n + 22 - 6n = 46$
17. In an election between two candidates, 860 votes were cast. If the winner received 130 more votes than the loser, how many votes did the winner receive?
18. The population of Los Angeles, California is about 7 times the population of Cleveland, Ohio. The population of Los Angeles is about 3,500,000. What is the population of Cleveland?

19. Sam has 18 video cassettes, which is 15 less than 3 times the number of cassettes in Daisy's collection. How many video cassettes does Daisy own?
20. The daily cost of renting a car is \$25 plus \$0.30 per mile traveled. If Tameka paid \$110.20 for a day's rental, how many miles did she travel?
- [A] 367                      [B] 28                      [C] 451                      [D] 284
21. Find three consecutive integers with sum 186.
22. Find three consecutive integers with sum 204. Which is the greatest of the three?
- [A] 23                      [B] 71                      [C] 65                      [D] 69

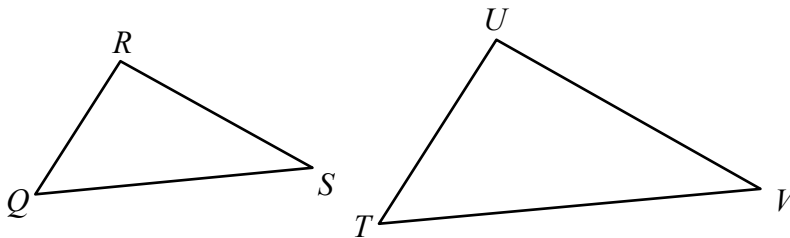
Solve:

23.  $\frac{1}{5}(15x + 10) = 19$

24.  $\frac{x}{8} - \frac{x}{9} = 1$

25.  $\frac{f}{3} = \frac{4}{36}$       [A] 3                      [B]  $\frac{1}{12}$                       [C] 12                      [D]  $\frac{1}{3}$

26. In the figure (not drawn to scale),  $\triangle QRS$  is similar to  $\triangle TUV$ . Find length  $UV$  to the nearest hundredth if  $QR = 7$ ,  $TU = 13$ , and  $RS = 10$ .



- [A] 45.50                      [B] 5.38                      [C] 9.10                      [D] 18.57

27. If 5 boxes of cherries cost \$16.50, how much will 9 boxes of cherries cost?

Solve:

28.  $x + 8 = -x - 3$

29.  $4x - 4 = x - 2$       [A] 0                      [B]  $-\frac{2}{3}$                       [C]  $\frac{3}{2}$                       [D]  $\frac{2}{3}$

30. Randy drove from his home to Dallas at an average speed of 50 mph. On the return trip, he drove at an average speed of 55 mph. The return trip took Randy 1 hour less than the trip to Dallas. How many total hours did he travel?

31. Solve:  $4x - 12 = x + 3(5 + x)$

32. Which equation is an identity?

[A]  $-2x + 7 = 2x + 7 - 4x$

[B]  $2y + 7 = 4y - 2y$

[C]  $-2x + 7 = 2x + 8 - 4x$

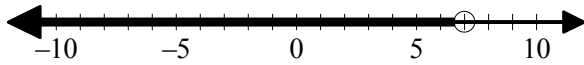
[D]  $4x - 10 = x + 3(5 + x)$

33. Solve:  $2 = |-3 + 4x|$

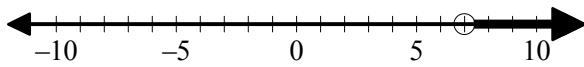
34. Graph:  $x - 1 \geq 3$

35. Solve the inequality and graph the solutions on a number line.  $x + 5 > 2$

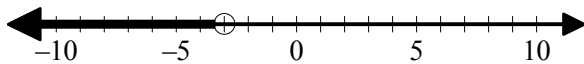
[A]  $x < 7$



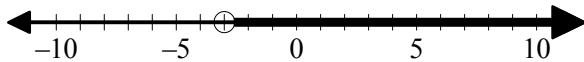
[B]  $x > 7$



[C]  $x < -3$



[D]  $x > -3$



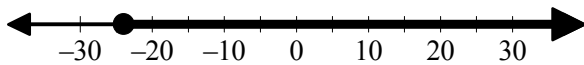
36. In order to collect a salary bonus, Joe Bigleague must get at least 240 hits this season. In the second to last week of the season, Joe started with 218 hits and got 14 more. How many hits must Joe get in the season's last week?

37. Suppose you must maintain a balance of at least \$800 in your checking account in order to have free checking. The balance in your account is \$849.50 before you write a check for \$45. How much cash can you withdraw from the account and still have free checking?

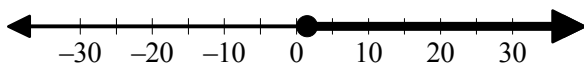
38. Solve the inequality and graph the solution on a number line.  
 $-7x > -21$

39. Solve the inequality and graph the solution on a number line.  $\frac{1}{4}x \leq -6$

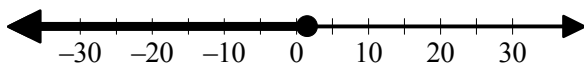
[A]  $x \geq -24$



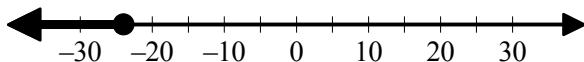
[B]  $x \geq 1.5$



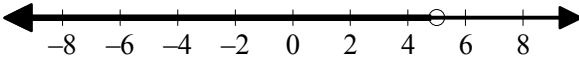
[C]  $x \leq 1.5$



[D]  $x \leq -24$



40. The number line shows the graph of all the solutions of an inequality. Which could not be that inequality?



- [A]  $2x < -10$       [B]  $-x > -5$       [C]  $-2x > -10$       [D]  $5 > x$       [E]  $-20 < -4x$

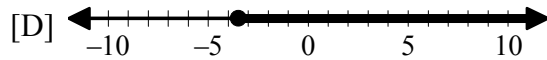
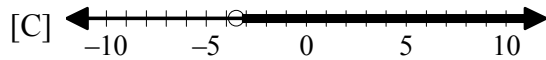
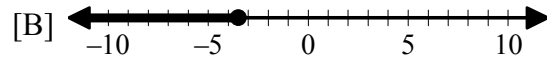
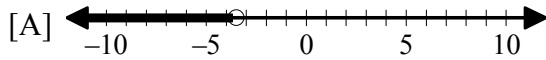
41. Lev earns \$6.40 per hour working after school. He needs at least \$185 for his holiday shopping. How many hours must he work to reach his goal?

- [A] at least 28 hours      [B] at least 29 hours      [C] at least 27 hours      [D] at least 30 hours

Graph:

42.  $\frac{2x+2}{5} < 2$

43.  $5x-2 < 3(x-3)$



44. Which value of  $n$  is a solution of both  $3(n-3) \leq 4$  and  $4(n-2) > -1$ ?

- [A] 0      [B] 2      [C] 5      [D] 1      [E] 6

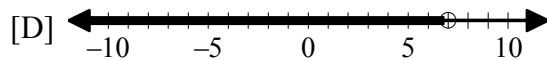
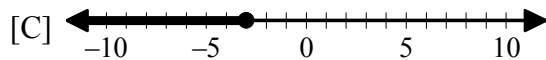
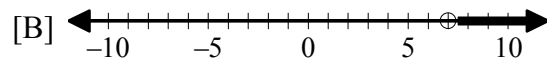
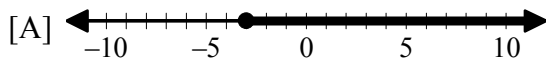
45. The width of a rectangle is 36 centimeters. Find all possible values for the length of the rectangle if the perimeter is at least 368 centimeters.

- [A]  $x \geq 148$  cm      [B]  $x \geq 56$  cm      [C]  $x \geq 10.22$  cm      [D]  $x \geq 332$  cm

Graph:

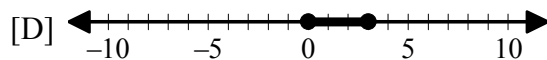
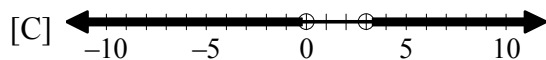
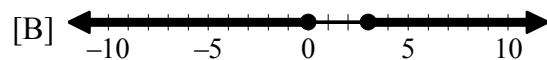
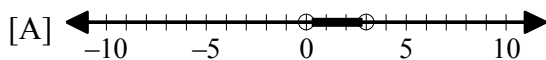
46.  $x+4 \leq 7$  and  $-10x < 30$

47.  $x < 7$  or  $x \leq -3$



48.  $|2x+1| > 3$

49.  $|8x-12| \leq 12$



50. If the replacement set is the set of integers, find the solution set for the inequality  $x+7 \geq 12$ .

- [A]  $\{19, 20, 21, \dots\}$       [B]  $\{3, 4, 5, \dots\}$       [C]  $\{5, 6, 7, \dots\}$       [D]  $\{5\}$