

*Math 7 Practice Test: Expressions, Equations and Inequalities*

Name:

Date:

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(#1-4) Define the terms below and give an example of each.

1. Equation

2. Inequality

3. Solution Set

4. Variable

Solve each of the equations below. Show your work.

5.  $4p + 5 = 33$

6.  $\frac{m}{3} - 2 = 9$

7.  $-6c - 4 = 32$

8.  $-40 = 4x + 20 + x$

9.  $\frac{2}{3}(d - 4) = 8$

10.  $7y + 1.8 = 50.8$

11. Write an inequality for each situation.

a. The theatre ( $t$ ) can have no more than 130 people. \_\_\_\_\_

b. The rental fee ( $r$ ) is below \$50.96. \_\_\_\_\_

c. The temperature ( $t$ ) is above  $80^{\circ}F$ . \_\_\_\_\_

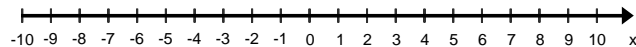
d. The wait time ( $w$ ) for a table at the restaurant is at least 20 minutes. \_\_\_\_\_

e. The number  $p$  is between  $-3$  and  $4$ . \_\_\_\_\_

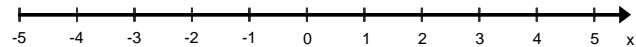
f. The number  $n$  is greater than 4 or less than 0. \_\_\_\_\_

#12 – 13 Graph each inequality.

12.  $m \geq -5$

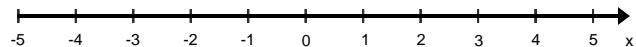


13.  $n < 2$

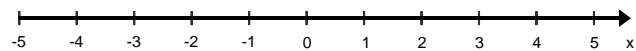


#14 – 15 Solve. Then graph each solution set on the number line provided.

14.  $f - 2 > -3$



15.  $-3p + 2 \leq -7$



16. Which operation should be performed **second** when solving the equation  $\frac{x}{7} + 2 = 11$ ?

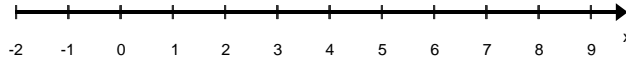
- A. Add 2
- B. Divide by 7
- C. Multiply by 7
- D. Subtract 2

17. An inequality is shown below.

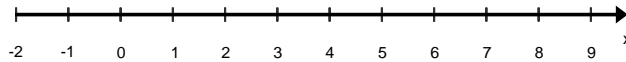
$$t > 5$$

Which graph represents all the solutions of the inequality?

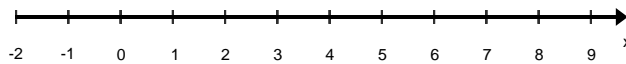
A.



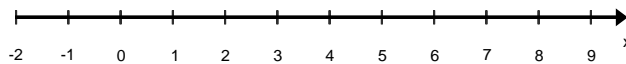
B.



C.



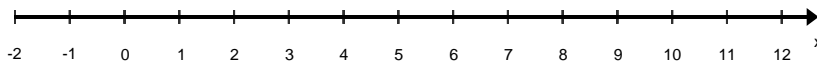
D.



18. A school choir must practice singing for at least 175 minutes each week. So far this week they have practiced for 85 minutes. Which inequality describes all the possible number of minutes ( $m$ ) the choir must practice singing during the remainder of the week?

- A.  $m \geq 90$
- B.  $m \leq 90$
- C.  $m \geq 260$
- D.  $m \leq 260$

19. Look at the graph below.



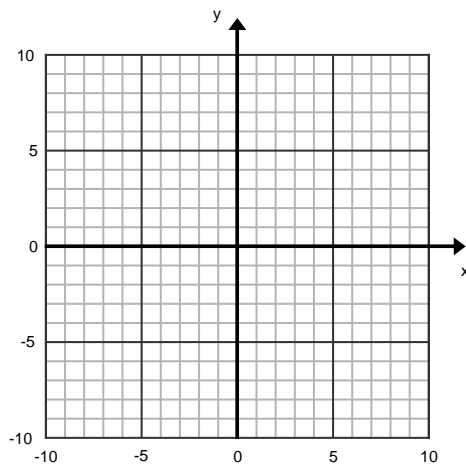
Which inequality describes the graph?

- A.  $w < 4$
- B.  $w \leq 4$
- C.  $w > 4$
- D.  $w \geq 4$

20. Jonah needs some items to repair kitchen cabinets in his home. At the Handy Man 'R Us store he found a small can of stain for \$5.99, a tarp for \$3.98, and a paint brush for \$2.57. He also needs about 8 door hinges. If he only has \$50.00 to spend, what is the most he can spend on each hinge? Write an inequality and solve it to answer the question. Show your work.

Long-Term Memory Review

21. Graph the function  $y = 4x$ , in the plane below.



22. Simplify.  $24 \div 3 \times 2 + 4^2 - 10 =$