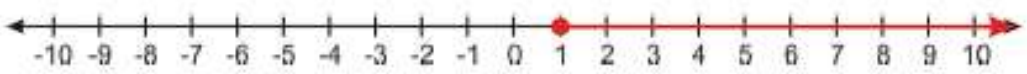
Algebra 1 Unit 6 Homework

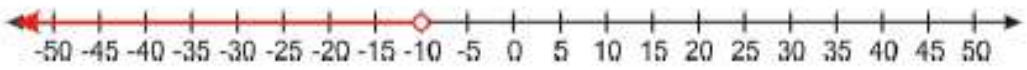
DO NOT WRITE ON THIS PAPER ---- DO NOT WRITE ON THIS PAPER---- DO NOT WRITE ON THIS PAPER

Review Questions

1. Write the inequality represented by the graph.

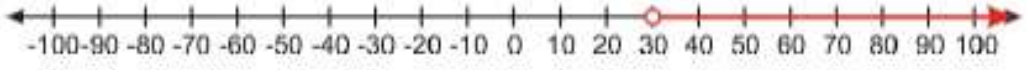


2. Write the inequality represented by the graph.



3. Write the inequality represented by the graph.

4. Write the inequality represented by the graph.



Graph each inequality on the number line.

5. $x < -35$
6. $x > -17$
7. $x \geq 20$
8. $x \leq 3$

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

9. $x - 5 < 35$
10. $x + 15 \geq -60$
11. $x - 2 \leq 1$
12. $x - 8 > -20$
13. $x + 11 > 13$
14. $x + 65 < 100$
15. $x - 32 \leq 0$
16. $x + 68 \geq 75$

Review Questions

Solve each inequality. Give the solution in inequality notation and solution graph.

1. $3x \leq 6$
2. $\frac{x}{5} > -\frac{3}{10}$
3. $-10x > 250$
4. $\frac{x}{-7} \geq -5$

Solve each inequality. Give the solution in inequality notation and interval notation.

5. $9x > -\frac{3}{4}$
6. $-\frac{x}{15} \leq 5$
7. $620x > 2400$
8. $\frac{x}{20} \geq -\frac{7}{40}$

Solve each inequality. Give the solution in inequality notation and set notation.

9. $-0.5x \leq 7.5$
10. $75x \geq 125$
11. $\frac{x}{-3} > -\frac{10}{9}$
12. $\frac{x}{-15} < 8$

Review Questions

Solve the following inequalities and give the solution in set notation and show the solution graph.

1. $4x + 3 < -1$
2. $2x < 7x - 36$
3. $5x > 8x + 27$
4. $5 - x < 9 + x$
5. $4 - 6x \leq 2(2x + 3)$
6. $5(4x + 3) \geq 9(x - 2) - x$
7. $2(2x - 1) + 3 < 5(x + 3) - 2x$
8. $8x - 5(4x + 1) \geq -1 + 2(4x - 3)$
9. $2(7x - 2) - 3(x + 2) < 4x - (3x + 4)$
10. $\frac{2}{3}x - \frac{1}{2}(4x - 1) \geq x + 2(x - 3)$
11. At the San Diego Zoo, you can either pay \$22.75 for the entrance fee or \$71 for the yearly pass which entitles you to unlimited admission. At most how many times can you enter the zoo for the \$22.75 entrance fee before spending more than the cost of a yearly membership?
12. Proteek's scores for four tests were 82, 95, 86 and 88. What will he have to score on his last test to average at least 90 for the term?

Review Questions

Evaluate the absolute values.

1. $|250|$
2. $|-12|$
3. $|-\frac{2}{5}|$
4. $|\frac{1}{10}|$

Find the distance between the points.

5. 12 and -11
6. 5 and 22
7. -9 and -18
8. -2 and 3

Solve the absolute value equations and interpret the results by graphing the solutions on the number line.

9. $|x-5|=10$
10. $|x+2|=6$
11. $|5x-2|=3$
12. $|4x-1|=19$

Graph the absolute value functions.

13. $y=|x+3|$
14. $y=|x-6|$
15. $y=|4x+2|$
16. $y=|\frac{x}{3}-4|$
17. A company manufactures rulers. Their 12-inch rulers pass quality control if they within $\frac{1}{32}$ inches of the ideal length. What is the longest and shortest ruler that can leave the factory?

Review Questions

Solve the following inequalities and show the solution graph.

1. $|x| \leq 6$
2. $|x| > 3.5$
3. $|x| < 12$
4. $|\frac{x}{5}| \leq 6$
5. $|7x| \geq 21$
6. $|x-5| > 8$
7. $|x+7| < 3$
8. $|x-\frac{3}{4}| \leq \frac{1}{2}$
9. $|2x-5| \geq 13$
10. $|5x+3| < 7$
11. $|\frac{x}{3}-4| \leq 2$
12. $|\frac{2x}{7}+9| > \frac{5}{7}$
13. A three month old baby boy weighs an average of 13 pounds. He is considered healthy if he is 2.5 lbs more or less than the average weight. Find the weight range that is considered healthy for three month old boys.

Review Questions

Graph the following inequalities on the coordinate plane.

1. $x < 20$
2. $y \geq -5$
3. $|x| > 10$
4. $|y| \leq 7$
5. $y \leq 4x+3$
6. $y > -\frac{x}{2}-6$
7. $3x-4y \geq 12$
8. $x+7y < 5$
9. $6x+5y > 1$
10. $y+5 \leq -4x+10$
11. $x-\frac{1}{2}y \geq 5$
12. $30x+5y < 100$
13. An ounce of gold costs \$670 and an ounce of silver costs \$13. Find all possible weights of silver and gold that makes an alloy that costs less than \$600 per ounce.
14. A phone company charges 50 cents cents per minute during the daytime and 10 cents per minute at night. How many daytime minutes and night time minutes would you have to use to pay more than \$20 over a 24 hour period?