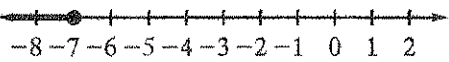


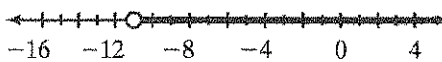
Practice 2-8 Inequalities and Their Graphs

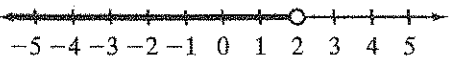
Write an inequality for each sentence.

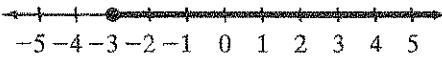
- The total t is less than sixteen. $t < 16$
- A number h is not less than 7. $h \geq 7$
- The price p is less than or equal to \$25. $p \leq 25$
- A number n is negative. $n < 0$

Write an inequality for each graph.

- 

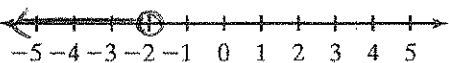
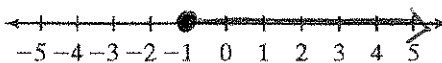
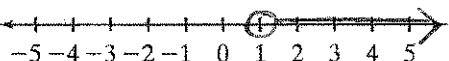
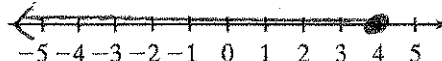
 $x \leq -7$
- 

 $x > -11$
- 

 $x < 2$
- 

 $x \geq -3$

Graph the solutions of each inequality on a number line.

- $x < -2$

- $y \geq -1$

- $k > 1$

- $p \leq 4$


Write an inequality for each situation.

- Everyone in the class is under 13 years old. Let x be the age of a person in the class.
 $x < 13$
- The speed limit is 60 miles per hour. Let s be the speed of a car driving within the limit.
 $s \leq 60$
- You have \$4.50 to spend on lunch. Let c be the cost of your lunch.
 $c \leq \$4.50$

Practice 2-9 Solving One-Step Inequalities by Adding or Subtracting

Practice

Write an inequality for each sentence. Then solve the inequality.

1. Six less than n is less than -4 .

$n - 6 < -4$ $n < 2$

2. The sum of a number k and five is greater than or equal to two.

$k + 5 \geq 2$ $k \geq -3$

3. Nine more than a number b is greater than negative three.

$b + 9 > -3$ $b > -12$

4. You must be at least 48 inches tall to ride an amusement park ride, and your little sister is 39 inches tall. How many inches i must she grow before she may ride the ride?

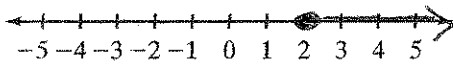
$39 + i \geq 48$ $i \geq 9$

5. You need no more than 3,000 calories in a day. You consumed 840 calories at breakfast and 1,150 calories at lunch. How many calories c can you eat for dinner?

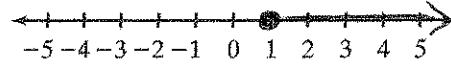
$840 + 1,150 + c \leq 3,000$ $c \leq 1,010$

Solve each inequality. Graph the solutions.

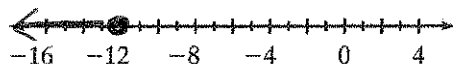
6. $7 + x \geq 9$ $x \geq 2$



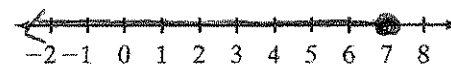
7. $-5 \leq x - 6$ $x \geq 1$



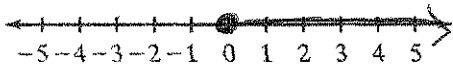
8. $0 \geq x + 12$ $x \leq -12$



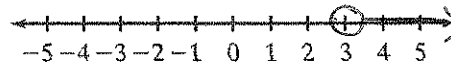
9. $x - 15 \leq -8$ $x \leq 7$



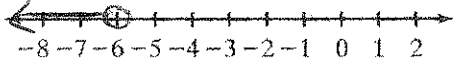
10. $13 + x \geq 13$ $x \geq 0$



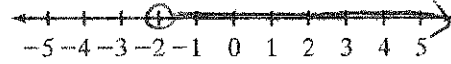
11. $x - 8 > -5$ $x > 3$



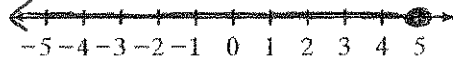
12. $4 + x < -2$ $x < -6$



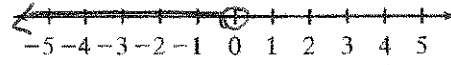
13. $x - 9 > -11$ $x > -2$



14. $x - 6 \leq -1$ $x \leq 5$



15. $-4 + x < -4$ $x < 0$



Practice 2-10 Solving One-Step Inequalities by Multiplying or Dividing

Write an inequality for each sentence. Then solve the inequality.

1. The product of k and -5 is no more than 30.

$-5k \leq 30$ $k \geq -6$

2. Half of p is at least -7 .

$\frac{1}{2}p \geq -7$ or $\frac{p}{2} \geq -7$ $p \geq -14$

3. The product of k and 9 is no more than 18.

$9k \leq 18$ $k \leq 2$

4. One-third of p is at least -17 .

$\frac{1}{3}p \geq -17$ or $\frac{p}{3} \geq -17$ $p \geq -51$

5. The opposite of g is at least -5 .

$-g \geq -5$ $g \leq 5$

Solve each inequality.

6. $-5x < 10$ $x > -2$ 7. $\frac{x}{4} > 1$ $x > 4$

8. $-8 < -8x$ $x < 1$ 9. $\frac{1}{3}x > -2$ $x > -6$

10. $48 \geq -12x$ $x \geq -4$ 11. $\frac{1}{3}x < -6$ $x < -18$

12. $\frac{x}{5} < -4$ $x < -20$ 13. $-x \leq 2$ $x \geq -2$

Determine whether each number is a solution of $7 \geq -3k$.

14. 2 yes 15. -2 yes 16. 0 yes 17. -3 no

Justify each step.

18. $-5n \geq 45$

$\frac{-5n}{-5} \leq \frac{45}{-5}$

$n \leq -9$

Divide both sides by -5 and reverse the inequality symbol.

Simplify: $45 \div -5 = -9$