5-1 Practice
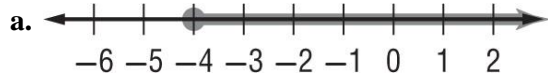## *Solving Inequalities by Addition and Subtraction*

Match each inequality with its corresponding graph.
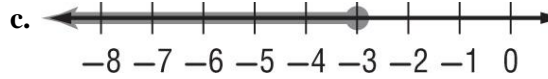
1. $-8 \geq x - 15$

a.

2. $4x + 3 < 5x$

b.
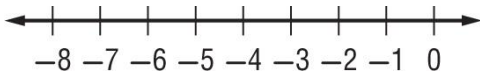
3. $8x \geq 7x - 4$
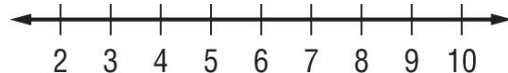
c.

4. $12 + x \leq 9$

d.

Solve each inequality. Check your solution, and then graph it on a number line.
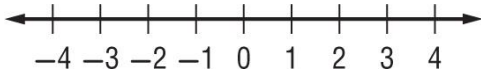
5. $r - (-5) > -2$
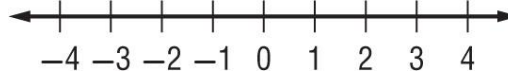

6. $3x + 8 \geq 4x$

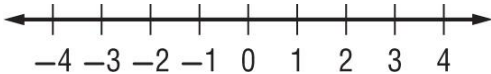

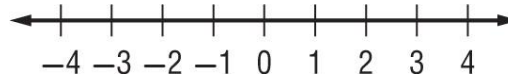**7.** $n - 2.5 \geq -5$

8. $1.5 < y + 1$

9. $z + 3 > \frac{2}{3}$

10. $\frac{1}{2} \leq c - \frac{3}{4}$

Define a variable, write an inequality, and solve each problem. Check your solution.

11. The sum of a number and 17 is no less than 26.

12. Twice a number minus 4 is less than three times the number.

13. Twelve is at most a number decreased by 7.

14. Eight plus four times a number is greater than five times the number.

15. ATMOSPHERIC SCIENCE The troposphere extends from the Earth's surface to a height of 6-12 miles, depending on the location and the season. If a plane is flying at an altitude of 5.8 miles, and the troposphere is 8.6 miles deep in that area, how much higher can the plane go without leaving the troposphere?

16. EARTH SCIENCE Mature soil is composed of three layers, the uppermost being topsoil. Jamal is planting a bush that needs a hole 18 centimeters deep for the roots. The instructions suggest an additional 8 centimeters depth for a cushion. If Jamal wants to add even more cushion, and the topsoil in his yard is 30 centimeters deep, how much more cushion can he add and still remain in the topsoil layer?