

6

CHAPTER REVIEW

6.2 Solve Inequalities Using Multiplication and Division

pp. 363–368

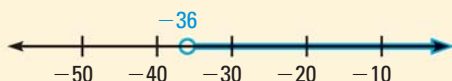
EXAMPLE

Solve $\frac{x}{-4} < 9$. Graph your solution.

$$\frac{x}{-4} < 9 \quad \text{Write original inequality.}$$

$$-4 \cdot \frac{x}{-4} > -4 \cdot 9 \quad \text{Multiply each side by } -4. \text{ Reverse inequality symbol.}$$

$$x > -36 \quad \text{Simplify.}$$

▶ The solutions are all real numbers greater than -36 .

EXERCISES

Solve the inequality. Graph your solution.

8. $\frac{p}{2} \leq 5$

9. $\frac{n}{-4.5} < -8$

10. $-3x > 27$

11. $2y \geq 18$

12. **GYMNASTICS** In men's gymnastics, an athlete competes in 6 events. Suppose that an athlete's average score per event is at most 9.7 points. Write and solve an inequality to find the possible total scores for the athlete.

EXAMPLES

1, 2, 3, 4, and 5

on pp. 363–365
for Exs. 8–12

6.3 Solve Multi-Step Inequalities

pp. 369–374

EXAMPLE

Solve $4x + 7 \geq -13$. Graph your solution.

$$-4x + 7 \geq -13 \quad \text{Write original inequality.}$$

$$-4x \geq -20 \quad \text{Subtract 7 from each side.}$$

$$x \leq 5 \quad \text{Divide each side by } -4. \text{ Reverse inequality symbol.}$$

▶ The solutions are all real numbers less than or equal to 5.



EXERCISES

Solve the inequality, if possible. Graph your solution.

13. $2g + 11 < 25$

14. $\frac{2}{3}r - 4 \geq 1$

15. $1 - 3x \leq -14 + 2x$

16. $3(q + 1) < 3q + 7$

17. $8(t - 1) > -8 + 8t$

18. $-3(2n - 1) \geq 1 - 8n$

19. **TICKET PURCHASES** You can order discount movie tickets from a website for \$7 each. You must also pay a shipping fee of \$4. You want to spend no more than \$40 on movie tickets. Find the possible numbers of movie tickets that you can order.

EXAMPLES

1, 2, 3, and 4

on pp. 369–370
for Exs. 13–19