

Multi-Part Lesson 4-3

PART A

PAGES 243–246

Write an inequality for each sentence.

- A number is less than 10.
- A number is greater than or equal to -7 .
- A number is less than -2 .
- A number is more than 5.
- A number is less than or equal to 11.
- A number is no more than 8.

Graph each inequality on a number line.

- $x > 5$
- $y > 0$
- $z < -2$
- $a \geq 6$
- $b \leq 2$
- $x \geq 1$
- $a \leq 3$
- $b \geq 1$
- $x < -2$
- $n \geq -3$
- $t > -1$
- $y \leq -5$

PART B

PAGES 247–250

Solve each inequality. Graph the solution set on a number line.

- $y + 3 > 7$
- $c - 9 < 5$
- $x + 4 \geq 9$
- $y - 3 < 15$
- $t - 13 \geq 5$
- $x + 3 < 10$
- $y - 6 \geq 2$
- $x - 3 \geq -6$
- $a + 3 \leq 5$
- $c - 2 \leq 11$
- $a + 15 \geq 6$
- $y + 3 \geq 18$
- $y + 16 \geq -22$
- $x - 3 \geq 17$
- $y - 6 > -17$
- $y - 11 < 7$
- $a + 5 \geq 21$
- $c + 3 > -16$
- $x - 12 \geq 2$
- $x + 5 \geq 5$
- $y - 6 > 31$
- $a - 6 > 17$
- $y + 7 > 3$
- $a + 13 \geq -16$
- $y - 6 > 5$
- $y + 6 < -5$
- $x - 17 \geq 34$
- $y + 1 \leq 16$
- $a - 14 \geq 16$
- $x + 14 \leq 20$

PART C

PAGES 251–255

Solve each inequality. Graph the solution set on a number line.

- $5p \geq 25$
- $4x < 12$
- $15 \leq 3m$
- $\frac{d}{3} > 15$
- $8 < \frac{r}{7}$
- $9g < 27$
- $4p \geq 24$
- $5p > 25$
- $-4 > \frac{-k}{3}$
- $\frac{-z}{5} > 2$
- $-3x \leq 9$
- $-5x > -35$
- $\frac{a}{-6} < 1$
- $\frac{x}{-5} \leq -2$
- $-2x < 16$

Multi-Part Lesson 4-4

PART A

PAGES 258–261

Solve each inequality. Graph the solution set on a number line.

- | | | |
|-------------------------------|----------------------------|-----------------------------|
| 1. $2x - 3 > 11$ | 2. $6x + 5 \leq 23$ | 3. $12 \leq 3x - 6$ |
| 4. $-3 < 4x + 1$ | 5. $-8x + 4 \leq -12$ | 6. $-5x - 6 > 19$ |
| 7. $\frac{x}{4} + 2 > -3$ | 8. $-18 < -3x + 6$ | 9. $4 \leq 6 + \frac{x}{3}$ |
| 10. $-7 + 2x \leq 5$ | 11. $-4x - 5 > 7$ | 12. $-10.4 > 0.8 + 1.6x$ |
| 13. $2.1x - 3 > 5.4$ | 14. $\frac{x}{-5} + 2 < 4$ | 15. $80 \leq -15x + 5$ |
| 16. $3 \geq 5 + \frac{x}{-3}$ | 17. $-0.6x + 1.3 < 2.5$ | 18. $-3.7 \geq -1.2x + 1.1$ |

PART B

PAGES 262–266

Write a compound inequality to represent each situation.

- TICKETS** Tickets for a concert cost at least \$31 and no more than \$58.
- AGE** A person applying to be a Federal Law Enforcement Officer must be at least 21 years of age but no older than 37 at the time of his or her appointment.

Graph the solution set of each inequality.

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|------------------------------|--------------------------------|---------------------------|
| 3. $m > 3$ and $m < 9$ | 4. $r \geq -6$ or $r \leq -10$ | 5. $a < -2$ or $a > 3$ |
| 6. $k > -3$ and $k < 0$ | 7. $d < -6$ or $d \geq -2$ | 8. $n > 2$ and $n \leq 7$ |
| 9. $x < -4$ and $x \geq -10$ | 10. $y \geq 3$ or $y \leq -1$ | 11. $p > 6$ or $p \leq 4$ |

Write a compound inequality to represent each situation. Then graph the solution set on a number line.

- Negative 4 is less than a number, which is less than or equal to 2.
- A number is greater than or equal to 5 but less than 9.

Multi-Part Lesson 5-1

PART A

PAGES 279–284

Write each expression using exponents.

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| 1. $4 \cdot 4 \cdot 4 \cdot 4$ | 2. $\frac{3}{4} \cdot \frac{3}{4}$ | 3. $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7$ |
| 4. $4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5$ | 5. $3 \cdot 2 \cdot \frac{5}{6} \cdot \frac{5}{6} \cdot \frac{5}{6} \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot \frac{5}{6}$ | |
| 6. $b \cdot b \cdot b \cdot b \cdot c \cdot c \cdot c \cdot c \cdot c \cdot c$ | 7. $3 \cdot 2 \cdot 5 \cdot 5 \cdot 5 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 5$ | |
| 8. $a \cdot a \cdot a \cdot b \cdot b \cdot b \cdot a \cdot a \cdot a \cdot b$ | 9. $6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6$ | |

Write each expression in standard form.

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|-----------------------------|----------------------------------|--|---------------------|
| 10. 4^3 | 11. 6^2 | 12. $\left(\frac{2}{5}\right)^3$ | 13. $5^2 \cdot 6^2$ |
| 14. $3 \cdot 2^4$ | 15. $10^4 \cdot 3^2$ | 16. $5^3 \cdot 1^9$ | 17. $2^2 \cdot 2^4$ |
| 18. $2 \cdot 3^2 \cdot 4^2$ | 19. 7^3 | 20. $\left(\frac{1}{2}\right)^3 \cdot 4^5$ | 21. $3^5 \cdot 4^2$ |
| 22. $7^2 \cdot 3^4$ | 23. $\left(\frac{1}{3}\right)^3$ | 24. $(-2)^4$ | 25. $(-5)^3$ |