10 Counting Methods and Probability

TEXAS

Before

In previous chapters, you learned the following skills, which you'll use in Chapter 10: simplifying expressions, multiplying binomials, and finding areas.

Prerequisite Skills

VOCABULARY CHECK

Copy and complete the statement.

1. The **coefficient** of x^2 in the expression $3x^3 - 15x^2 + 4$ is __?__.
2. Written as a fraction in lowest terms, the **ratio** of 18 to 45 is __?__.
3. The expressions $x + 3$ and $2x - 1$ are examples of **binomials** because they have __?__ terms.

SKILLS CHECK

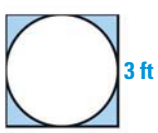
Simplify the expression. *(Review p. 2 for 10.1.)*

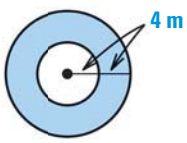
4. $\frac{6 \cdot 5 \cdot 4 \cdot 3}{2 \cdot 1}$
5. $\frac{13 \cdot 12 \cdot 11}{10 \cdot 9 \cdot 8}$
6. $\frac{8 \cdot 7 \cdot 6 \cdot 5 \cdot 4}{5 \cdot 4 \cdot 3 \cdot 2 \cdot 1}$

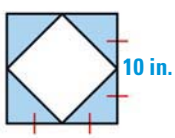
Find the product. *(Review p. 346 for 10.2.)*

7. $(x + y)^3$
8. $(5x + 1)^3$
9. $(3x - 2y)^3$

Find the area of the shaded region. Assume all shapes are circles or squares. *(Review pp. 991–992 for 10.3.)*

10. 

11. 

12. 

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