

Name _____

8-5B Lesson Master

Questions on SPUR Objectives

See pages 521–523 for objectives.

SKILLS Objectives A, B and C

In 1–3, simplify and give the answer as a simple fraction.

1. $4\left(\frac{1}{2}\right)^4$ _____

2. $96\left(\frac{1}{4}\right)^4$ _____

In 3 and 4, an expression is given.

a. Write the expression in expanded form.

b. Simplify the expression.

3. $(-7x)^2$

4. $\left(\frac{2a}{5b}\right)^3$

a. _____

a. _____

b. _____

b. _____

In 5–11, simplify and give the answer as a simple fraction.

5. $(3y^2)^3$ _____

6. $-(2m^2)^4$ _____

7. $(-4n^5)^3$ _____

8. $-(6pr^2)^2$ _____

9. $\left(\frac{c}{4}\right)^2$ _____

10. $\left(\frac{9}{4}\right)^2 \cdot \left(\frac{4}{3}\right)^5$ _____

11. $\left(\frac{49}{e}\right) \cdot \left(\frac{3e^2}{7}\right)^3$ _____

In 12–16, rewrite without parentheses and simplify.

12. $(2a^2b)^5$ _____

13. $4(-3c^3d^4)^2$ _____

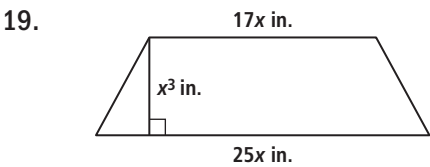
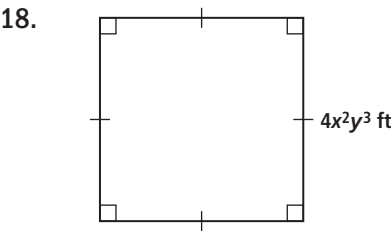
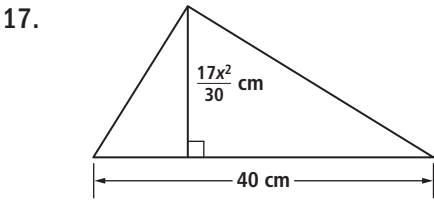
14. $\left(\frac{-3e^5f^7}{5e^3f^9}\right)^3$ _____

15. $\frac{-4}{7} \cdot \left(\frac{h^5}{2h^2}\right)^4$ _____

16. $(6j^5k)^2 \cdot \left(\frac{k}{2j^6}\right)^3$ _____

Name

In 17–19, find the area of the figure.



Area of a trapezoid is found by

$$\frac{1}{2} \cdot \text{height} \cdot (\text{base 1} + \text{base 2}).$$

PROPERTIES

 Objective G

In 20–22,

- a. Tell what value of x will make the statement true for all values of the variables.
- b. Identify the property that justifies the first step in simplifying the statement.

20. $(-2m^3n^{-1})^x = \frac{-32m^{15}}{n^5}$

- a. _____
- b. _____

21. $10 \cdot \left(\frac{6m}{5n^3}\right)^x = \frac{72m^2}{5n^6}$

- a. _____
- b. _____

22. $x^3 = -27m^{18}n^{12}$

- a. _____
- b. _____