Name

LESSON MASTER 2-3 B

Questions on SPUR Objectives

Skills Objective A: Multiply and simplify algebraic fractions.

In 1–12, use the Equal Fractions Property to simplify.

1. $\frac{50}{75}$ _____
2. $\frac{3t}{7t}$ _____
3. $\frac{10u}{25u}$ _____
4. $\frac{rs}{3r}$ _____
5. $\frac{220}{1100c}$ _____
6. $\frac{45mn}{15m}$ _____
7. $\frac{4gh}{12gj}$ _____
8. $\frac{1700}{400}$ _____
9. $\frac{28d}{14d}$ _____
10. $\frac{16xy^2}{8x}$ _____
11. $\frac{19w^2}{12w}$ _____
12. $\frac{fg}{g^2}$ _____

13. *Multiple choice.* Choose the fraction which is *not* equal to the others. _____

(a) $\frac{7m}{10m}$ (b) $\frac{14}{20y}$ (c) $\frac{35}{50}$ (d) $\frac{70ab}{100ab}$

In 14–27, multiply. Simplify the product where possible.

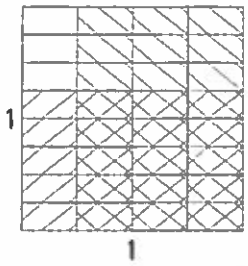
14. $\frac{2}{5} \cdot \frac{7}{8}$ _____
15. $\frac{11}{2} \cdot \frac{3}{4}$ _____
16. $\frac{u}{v} \cdot \frac{a}{b}$ _____
17. $\frac{m}{f} \cdot \frac{f}{y}$ _____
18. $20 \cdot \frac{2r}{7}$ _____
19. $\frac{4w}{5} \cdot \frac{5}{4w}$ _____
20. $\frac{3a}{2a} \cdot \frac{1}{6}$ _____
21. $\frac{1}{b} \cdot b$ _____
22. $62k \cdot \frac{1}{62}$ _____
23. $\frac{st}{9} \cdot \frac{2}{su}$ _____
24. $\frac{110b}{9c} \cdot \frac{3c^2}{44b^2}$ _____
25. $\frac{2.5e}{f^2} \cdot \frac{f^2}{e^2}$ _____
26. $\frac{2}{3d} \cdot \frac{h}{8} \cdot \frac{6d}{a}$ _____
27. $\frac{85}{100} \cdot \frac{30}{7s} \cdot \frac{10s}{3r}$ _____

28. Janine's math classroom is $\frac{2}{3}$ as long and $\frac{3}{4}$ as wide as the computer lab. How do the areas of these two rooms compare?

29. A box is $\frac{1}{2}$ as long, $\frac{1}{2}$ as wide, and $\frac{1}{2}$ as high as a crate. How many of these boxes will fit in the crate? Explain how you got your answer.

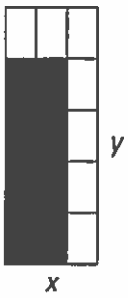
Representations Objective J: Use rectangles to picture multiplication.

30. What multiplication sentence is pictured at the right?



31. Draw a picture at the right to represent the product $\frac{1}{3} \cdot \frac{2}{5}$.

32. The largest rectangle at the right has width x and length y.



a. If each of the smallest rectangles has the same dimensions, what are these dimensions? What is the area of each of the smallest rectangles?

b. What is the area of the shaded region?

c. What product of algebraic fractions is represented by the product of the length and width of the shaded region?