

Name _____

8-3A Lesson Master

Questions on SPUR Objectives
See pages 521–523 for objectives.

SKILLS Objective A

In 1 and 2, a fraction is given.

- a. Write the numerator and denominator in expanded form.
- b. Simplify the fraction.

1. $\frac{m^8}{m^5}$

a. _____

b. _____

2. $\frac{21a^7b^3}{3a^5b}$

a. _____

b. _____

In 3–10, simplify.

3. $\frac{(-9)^m}{(-9)^n}$ _____

4. $\frac{6.02 \cdot 10^{23}}{2 \cdot 10^{19}}$ _____

5. $\frac{a^{14}}{a^9}$ _____

6. $\frac{n^{21}}{n^8}$ _____

7. $\frac{2r^5}{6r}$ _____

8. $\frac{32w^{10}}{-w^{10}}$ _____

9. $\frac{-14a^5b^3}{-4a^4b}$ _____

10. $\frac{140m^{11}n^3}{10m^7n^3}$ _____

PROPERTIES Objective G

11. Write an algebraic fraction to which the Quotient of Powers Property can be applied to simplify to $5n^4$. _____

12. Explain how to use the Quotient of Powers Property to find the value of x in $\frac{m^x}{m^7} = m^5$.
- _____
- _____

13. Marco tried to simplify $\frac{n^8}{n^2}$ and he got n^4 . Explain the error he made in simplifying the fraction.
- _____
- _____