

Name _____

8-9A Lesson Master

Questions on SPUR Objectives

See pages 521–523 for objectives.

SKILLS Objective C

In 1–6, rewrite without parentheses and without negative exponents.

- | | |
|--|---|
| 1. $(2a^3b^{-4})^3$ _____ | 2. $\left(\frac{5m^2n}{4m^3n^4}\right)^4$ _____ |
| 3. $(-7x^{-4}y^8) \cdot (2x^5y)^6$ _____ | 4. $\left(\frac{6m^{-1}n^2}{11m^4n^{-7}}\right)^{-2}$ _____ |
| 5. $(6x^3y^{-6})^{-2}$ _____ | 6. $(-a^4b^2)^{-3} \cdot (2a^5b^{-6})$ _____ |

PROPERTIES Objective F

7. Tell whether the pattern $3x^2 = x^3$ is true for the given instances.
- a. $x = 0$ _____ b. $x = 1$ _____ c. $x = 3$ _____
8. Tell whether the pattern $x^{\frac{1}{2}} = \sqrt{x}$ is true for the given instances.
- a. $x = 0$ _____ b. $x = 1$ _____ c. $x = 4$ _____
9. Find a counterexample for the pattern $x^2 \cdot x^4 = x^8$.
- _____
- _____

10. Terri and Kandy both simplified $\left(\frac{3a^7b^3}{a^5b^{-6}}\right)^{-2}$. State which property each student used for each step of their work.

Terri's Work

Step 1: $(3a^2b^8)^{-2}$ a. _____

Step 2: $3^{-2}a^{-4}b^{-16}$ b. _____

Step 3: $\frac{1}{9a^4b^{16}}$ c. _____

Kandy's Work

Step 1: $\frac{(3a^7b^2)^{-2}}{(a^5b^{-6})^{-2}}$ d. _____

Step 2: $\frac{3^{-2}a^{-14}b^{-4}}{a^{-10}b^{12}}$ e. _____

Step 3: $3^{-2}a^{-4}b^{-16}$ f. _____

Step 4: $\frac{1}{9a^4b^{16}}$ g. _____