**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_**

**Simplify Exponents**

**Worksheet 459**

**Simplify. Your answer should contain only positive exponents.**

**1.** 3$b^{0}$ ∙2$a^{3}$ **2.** *x* ∙ *y*$x^{2}$ ∙ *y*$x^{2}$ **3.**  3$x^{3}y^{3}$ ∙ 3$x^{3}y^{3}$

**4.** 3*mn* ∙ 3*m*$n^{3}$ **5.**  3*a*$b^{3}$ ∙ $a^{3}b^{3}$ **6.** 2$n^{3}$ ∙ 3$mn^{3}$

**7.** 2$a^{3}b^{3}$ ∙ 2$a^{3}b^{2}$ **8.** 3*x* ∙ 2$y^{3}$ **9.** 3$mn^{2}$ ∙ 2$m^{2}n^{3}$

**10.** 3$u^{2}v^{2}$ ∙ 2*uv*  **11.** *–n*$m^{-4}$ ∙ ($m^{0}n^{4})^{3}$ **12.** (*–*$x^{3}∙x^{-4})^{5}$

**13.**  ($-y^{2})^{4}$ ∙ -*x*$y^{3}$ **14.** ($x^{3}y^{3})^{5}$(−$x^{-4}y^{0})^{3}$ **15.**  *−x*$y^{-3}$ ∙ ($x^{-1}y^{4})^{3}$

**16.** ($x^{-3}y^{4})^{5}$ ∙ −*y*  **17.** ($x^{-2}y^{5})^{3}$ ∙ $x^{-5}y^{-3}$ **18.** (−$m^{-3}n^{0})^{4}$ ∙ $–n^{2}$

**19.** $x^{-5}y^{4}$ ∙ (−$x^{4}y^{3})^{4}$ **20.** (−$m^{3})^{3}$ ∙ $-n^{4}$ **21.** $\frac{4m^{-2}n^{-2}}{-4mn^{4}}$

**22.** $\frac{-5x^{0}y^{2}}{-4x^{-5}y^{-1}}$