

7-2 Multiplying Powers With the Same Base

Simplify each expression completely. Leave your answer in fraction form, if necessary. (1 pt each)

1. $x^7 \cdot x^{-1}$

2. $y^{-5} \cdot y^2$

3. $2z^3 \cdot z^{-4} \cdot 5z^4$

4. $(-2a^3)(-a)$

5. $(4b^{-2})(-2b^{-3})$

6. $(-5h^{-3})(-2h^{-4})$

7. Simplify each expression. Write your answer in scientific notation.

a. $(7 \times 10^{-2})(2 \times 10^5)$

b. $(0.1 \times 10^7)(0.3 \times 10^8)$

8. A gallon of water contains about 12.7×10^{25} molecules. The Mississippi River discharges about 2.69×10^7 gal every minute. About how many molecules is this?