

Exponent Properties Worksheet

Name

Simplify each expression.

1. 3^{-3}

$$= \frac{1}{3^3}$$
$$= \boxed{\frac{1}{27}}$$

2. $5(-6)^0$

$$= 5 \cdot 1$$
$$= \boxed{5}$$

3. $a^{-5}b$

$$= \boxed{\frac{b}{a^5}}$$

4. $n^{-6} \cdot n^{-9}$

$$= n^{-15}$$
$$= \boxed{\frac{1}{n^{15}}}$$

5. $\frac{h^{-2}}{j^{-3} \cdot j^1}$

$$= \frac{h^{-2}}{j^{-2}}$$
$$= \boxed{\frac{j^2}{h^2}}$$

6. $f^5 \cdot f^2 \cdot f^0$

$$= \boxed{f^7}$$

7. $5(2x^2y^2)^5$

$$= 5 \cdot 32x^{10}y^{10}$$
$$= \boxed{160x^{10}y^{10}}$$

8. $v^{-9} \cdot (v^2)^4$

$$= v^{-9} \cdot v^8$$
$$= v^{-1}$$
$$= \boxed{\frac{1}{v}}$$

9. $(-3r^4p^6)^2$

$$= \boxed{9r^8p^{12}}$$

10. $(a^2b^3)^3(ab^3)^2$

$$= a^6b^9 \cdot a^2b^6$$
$$= \boxed{a^8b^{15}}$$

11. $(2x^2)(3x^5)$

$$= \boxed{6x^7}$$

12. $\frac{(-2c^{-1}d^5)^3}{4a^{-4}b^6}$

$$= \frac{-8c^{-3}d^{15}}{4a^{-4}b^6}$$
$$= \boxed{\frac{-2c^{12}d^4}{b^6}}$$