

Properties of Exponents Practice

Name

Key

1. $p^6 \cdot p^9$

$$p^{13}$$

2. $(b^5)^4$

$$b^{20}$$

3. $\frac{c^3}{c^2}$

$$c^3$$

4. $2m^2 \cdot 3m^3$

$$6m^5$$

5. $(2r^4)^3$

$$4r^8$$

6. $\frac{4g^6}{2g^4}$

$$2g^2$$

7. $-6t^4 \cdot 5t^2$

$$-30t^8$$

8. $(3r^3s^4)^3$

$$27r^9s^{12}$$

9. $\frac{12d^7}{-4d^3}$

$$-3d^4$$

10. $3^{-3} \cdot 2^3$

$$\frac{8}{27}$$

11. $(2^{-3})^3$

$$\frac{1}{64}$$

12. $\frac{f^6}{f^3}$

$$f^3$$

13. $8d^4 \cdot 6d^{-7}$

$$\frac{48}{d^3}$$

14. $(-3x^{-4})^3$

$$-27x^{-12}$$

$$= \frac{-27}{x^{12}}$$

15. $\frac{10a^3}{15a^9}$

$$\frac{2}{3a^6}$$

16. $-p^3w^{-2} \cdot 4pw^{-5}$

$$-\frac{4p^3}{w^7}$$

17. $(4r^4d^{-3})^2$

$$\frac{16r^8}{d^6}$$

18. $\frac{k^{-3}z^9}{k^{-3}z^{-2}}$

$$k^2z^{11}$$

19. $7v^2d^3 \cdot 9v^9d^3$

$$63v^{11}d^6$$

20. $(-6r^4u)^{-2}$

$$\frac{1}{36r^8u^2}$$

21. $\frac{3h^3k^{10}}{6h^2k^2}$

$$\frac{hk^8}{2}$$

22. $8x^{-3}y^2 \cdot 5x^3y^{-5}$

$$40x^0y^{-3} = \frac{40}{y^3}$$

23. $(xy)^2(x^{-3}y^2)$

$$x^{-1} = \frac{1}{x}$$

24. $\frac{-20e^5n^{-3}}{4e^2n^2}$

$$\frac{-5e^3}{n^6}$$

Challenge!!

1. $\frac{3h^{-4}}{2q^3} \cdot \frac{9h^2}{4q^3}$

$$\frac{27h^{-2}}{8q^8} = \frac{27}{8q^8h^2}$$

2. $\left(\frac{a^2b^4}{b^3}\right)^2$

$$(a^2b^3)$$

$$\boxed{a^4b^6}$$