

Properties of Exponents
Emphasis on Power of a Quotient

Simplify each of the following:

1. $\left(\frac{9d^{-6}}{7d}\right)^2$

2. $\left(\frac{4b^4}{6b^6w^2}\right)^3$

3. $\left(\frac{c^2}{c^{-6}}\right)^3$

4. $\left(\frac{9gd^{-4}}{5g^{-2}d^2}\right)^5$

5. $\left(\frac{4w^{-6}}{5w^2}\right)^2$

6. $\left(\frac{d}{d^4}\right)^5$

7. $\left(\frac{b^9}{b^{-2}}\right)^3$

8. $\left(\frac{2}{2^8}\right)^4$

9. $\left(\frac{8h^3}{2h}\right)^7$

10. $\left(\frac{gh}{8g^4h^6}\right)^2$

11. $\left(\frac{7^4}{7^{-6}}\right)^5$

12. $\left(\frac{4w^{-6}}{6w^2}\right)^3$

13. $\left(\frac{d^2}{d^{-2}}\right)^2$

14. $\left(\frac{2c^2}{8c^4}\right)^3$

15. $\left(\frac{gb}{9g^{-2}b^{-5}}\right)^4$

16. $\left(\frac{6k^8}{2k^4}\right)^2$

17. $\left(\frac{2^{-2}3^3}{2^{-4}3^6}\right)^6$

18. $\left(\frac{10a^{23}}{5a^{-15}}\right)^2$

19. $\left(\frac{b^3g^{-8}h^{-5}k^7}{b^{-1}g^2h^3k^{-2}}\right)^3$

20. $\left(\frac{3w^{-1}}{9w^6}\right)^4$