

EXERCISE 2: Simplify so that your answer contains only positive exponents. Do NOT use a calculator. The first two have been done for you.

1. $3x^2 \cdot 2x^3 = 6x^5$

2. $2k^{-4} \cdot 4k^2 = \frac{8}{k^2}$

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

4. $7m^3 \cdot -3m^{-3}$

5. $(2x^2)^{-3}$

6. $-3a^2b^{-3} \cdot 3a^{-5}b^8$

7. $\frac{3n^7}{6n^3}$

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

9. $\left(\frac{xy^4}{x^3y^2}\right)$

10. $-(-x)^3$

11. $(x^2y^{-1})^3$

12. $\frac{6u^4}{8u^2}$

13. $2uv^2 \cdot -4u^2v$

14. $\frac{x^2}{x^{-3}}$

15. $\frac{3x^4}{(x^{-2})^2}$

16. $\frac{x^{\frac{3}{2}}}{x^{\frac{1}{2}}}$

17. $x^2 \cdot x^3 \cdot x^4$

18. $(x^2)^{-3} \cdot 2x^3$

19. $(2m)^2 \cdot (3m^3)^2$

20. $(a^{-1} \cdot a^{-2})^2$

21. $(b^{-2})^{-3} \cdot (b^3)^2$

22. $\frac{(m^2n)^3}{(mn^2)^2}$

23. $\frac{1}{x^{-2}}$

24. $\frac{mn}{m^2n^3}$

25. $\frac{k^{-2}}{k^{-3}}$

26. $\left(\frac{m^2}{n^3}\right)^3$

27. $\left(\frac{x^2y^3z^4}{x^{-3}y^{-4}z^{-5}}\right)$