

5.1 Properties of Exponents

Simplify. Your answer should contain only positive exponents.

1) $-2uv^3 \cdot 3vu^4$

2) $3u^{-2}v^2 \cdot -u^{-3}v^4$

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

4) $(2nm^{-3})^3$

5) $\frac{-6x^8y^5}{-10x^7y^7}$

6) $-\frac{8m^{10}n^2}{2m^{10}n^6}$

7) $2x^3 \cdot (2x^5y^4)^4$

8) $(x^2y^{-4})^3 \cdot 2y^{-2}$

9) $\frac{(x^{-14}y^{11})^2}{2x^{-4}}$

10) $\frac{2a^3b^2}{(2a^2b^4)^{-2}}$

11) $\frac{(2zx^{-2})^{-1} \cdot x^4y^{-1}z^3}{yx^{-3}z^{-1}}$

12) $\frac{2m^2p^4 \cdot pqm^3}{(m^{-2}p^4)^{-3}}$