

MCT4C — Simplifying Exponential Expressions (Exponent Laws)

Problems

$$1. \frac{a^2 b^{-5}}{a^{-4} b^3}$$

$$2. (x^2 y^3)^2$$

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

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

$$5. \frac{(5y^{-2})^3}{25y^{-1}}$$

$$6. \frac{(m^4 n^{-3})^2}{m^3 n^{-5}}$$

$$7. \left(\frac{2x^2}{3y}\right)^2$$

$$8. \frac{16x^5 y^{-2}}{8x^{-1} y^4}$$

$$9. 81^{\frac{1}{2}}$$

$$10. 32^{\frac{3}{5}}$$

$$11. x^{\frac{3}{2}} \cdot x^{-\frac{1}{2}}$$

$$12. \frac{(x^{\frac{1}{2}} y^{\frac{3}{2}})^2}{x^{\frac{3}{2}} y^{\frac{1}{2}}}$$

$$13. (1.2 \times 10^5)(4 \times 10^{-3})$$