

Section 5.3 Negative Exponents and Scientific Notation

1. Which of the following expressions is equivalent to

$$\frac{x^{-2}y^3z^{-4}}{x^{-3}y^5z^5}$$

- (a) $x^{2/3}y^{3/5}z^{-4/5}$
- (b) xy^2z^9
- (c) $x^{-5}y^8z$
- (d) $\frac{x}{y^2z^9}$

2. Simplify: $\left(\frac{x^2}{y}\right)^{-3}$

- (a) $\frac{x^6}{y^3}$
- (b) $\frac{y^3}{x^6}$
- (c) $-\frac{y^3}{x^6}$
- (d) $\frac{-3x^2}{y}$

3. Simplify: $\frac{5x^6y^{-3}}{30x^2y^{-2}}$

- (a) $\frac{x^4}{6y^5}$
- (b) $\frac{x^3y^5}{6}$
- (c) $\frac{6x^4}{y}$
- (d) $\frac{x^4}{6y}$