

Accuplacer Study Modules

TOPIC: Exponent Rules

Instructions: Simplify each expression.

<p>1. $x^3 \cdot x^4 \cdot x^6$</p> $x^{3+4+6} = \boxed{x^{13}}$	<p>2. $(x^4y^8)^5$</p> $(x^4)^5 (y^8)^5$ $x^{4 \cdot 5} y^{8 \cdot 5}$ $\boxed{x^{20} y^{40}}$
<p>3. $\frac{x^5y^8}{x^4y^2} \cdot \frac{x^7y^6}{x^5y^3}$</p> $\frac{x^{5+7} y^{8+6}}{x^{4+5} y^{2+3}}$ $\frac{x^{12} y^{14}}{x^9 y^5}$ $x^{12-9} y^{14-5}$ $\boxed{x^3 y^9}$	<p>4. $\frac{(x^3y^4)^7}{(x^5y^2)^3}$</p> $\frac{(x^3)^7 (y^4)^7}{(x^5)^3 (y^2)^3}$ $\frac{x^{3 \cdot 7} y^{4 \cdot 7}}{x^{5 \cdot 3} y^{2 \cdot 3}}$ $\frac{x^{21} y^{28}}{x^{15} y^6}$ $x^{21-15} y^{28-6}$ $\boxed{x^6 y^{22}}$