

Last 3 examples

$$\begin{aligned}
 h) \quad & \frac{(5x^2)^2}{(5x^2)^0} \\
 &= \frac{(5)^2(x^2)^2}{1} \\
 &= 25x^4
 \end{aligned}$$

$$\begin{aligned}
 i) \quad & (4u^3v^2)^2 \div (-2u^2v^3) \\
 &= (4)^2(u^3)^2(v^2)^2 \div (-2u^2v^3) \\
 &= 16u^6v^4 \div (-2u^2v^3) \\
 &= -8u^{6-2}v^{4-3} \\
 &= -8u^4v
 \end{aligned}$$

$$\begin{aligned}
 j) \quad & \frac{(3^2)(3^3)}{(3^4)^2} \\
 &= \frac{3^{2+3}}{3^{4 \times 2}} \\
 &= \frac{3^5}{3^8} \\
 &= 3^{5-8} \\
 &= 3^{-3} \\
 &= \left(\frac{1}{3}\right)^3 \\
 &= \frac{1}{27}
 \end{aligned}$$