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$$\frac{y^2-4xy}{y-x} \div \frac{16x^2y^2-y^4}{4x^2-3xy-y^2} \div \frac{4}{x^3y^3}$$

$$= \frac{y^2-4xy}{y-x} \cdot \frac{4x^2-3xy-y^2}{16x^2y^2-y^4} \cdot \frac{x^3y^3}{4}$$

$$= \frac{y(y-4x)}{y-x} \cdot \frac{4x^2-3xy-y^2}{y^2(16x^2-y^2)} \cdot \frac{x^3y^3}{4}$$

$$= \frac{y(y-4x)}{y-x} \cdot \frac{4x^2-3xy-y^2}{y^2(4x-y)(4x+y)} \cdot \frac{x^3y^3}{4}$$

$$= \frac{y(y-4x)}{y-x} \cdot \frac{(4x+y)(x-y)}{y^2(4x-y)(4x+y)} \cdot \frac{x^3y^3}{4}$$

$$= \frac{-y(4x-y)}{-(x-y)} \cdot \frac{(4x+y)(x-y)}{y^2(4x-y)(4x+y)} \cdot \frac{x^3y^3}{4}$$

$$= \frac{\cancel{-y(4x-y)}}{\cancel{-(x-y)}} \cdot \frac{\cancel{(4x+y)(x-y)}}{y^2\cancel{(4x-y)(4x+y)}} \cdot \frac{x^3y^3}{4}$$

$$= \frac{-y}{-1} \cdot \frac{1}{y^2} \cdot \frac{x^3y^3}{4}$$

$$= y \cdot \frac{1}{y^2} \cdot \frac{x^3y^3}{4}$$

$$= \frac{x^3y^2}{4}$$