

(De här uppgifterna kan göras på flera olika sätt.)

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$$(a) \left(\frac{a^{-2}}{b^5}\right)^{-3} = \frac{(a^{-2})^{-3}}{(b^5)^{-3}} = \frac{a^6}{b^{-15}} = \frac{a^6}{\frac{1}{b^{15}}} = \frac{a^6}{1} \cdot \frac{b^{15}}{1} = a^6 \cdot b^{15}$$

$\left(\frac{a}{b}\right)^x = \frac{a^x}{b^x}$

$(a^x)^y = a^{x \cdot y}$

$a^{-x} = \frac{1}{a^x}$

$\frac{a^6}{\frac{1}{b^{15}}} = \frac{a^6}{1} \cdot \frac{b^{15}}{1} = a^6 \cdot b^{15}$
 Dimension av brik!

$$(b) \frac{5a^2b}{a^4} \cdot \frac{5b}{a^2} = \frac{5b}{a^2} \cdot \frac{5b}{a^2} = \frac{5b}{a^2} \cdot \frac{b^{-2}}{a^6} = \frac{5b^{-1}}{a^8} = \frac{5}{a^8} \cdot b^{-1}$$

$b \cdot b^{-2} = b^1 \cdot b^{-2} = b^{-1}$

$\left(\frac{a}{b}\right)^x = \frac{a^x}{b^x}$

$\frac{4 \cdot 3}{2} = \frac{4}{2} \cdot 3$

$\frac{5}{a^8} \cdot \frac{1}{b} = \frac{5}{a^8 b}$ $\left(= 5 \cdot \frac{1}{a^8} \cdot \frac{1}{b^1} = 5 \cdot a^{-8} \cdot b^{-1} \right)$

$a^{-x} = \frac{1}{a^x}$

Svar: (a) $a^6 \cdot b^{15}$ (b) $\frac{5}{a^8 b} \left(= 5a^{-8} b^{-1} \right)$