

EKSPONEN

Nama Anggota Kelompok

1. Tentukanlah nilai P yang memenuhi:

a. $(4^3)^4 = 4^p$ b. $m^5 \times m^p = m^8$ c. $(4m)^p = 64m^3$

Penyelesaian:

a. $(4^3)^4 = 4^p$

$$4^{\square} = 4^{\square}$$

\therefore nilai $P = \dots\dots$

b. $m^5 \times m^p = m^8$

$$m^{5+\dots} = m^8$$

\therefore nilai $P = \dots\dots$

c. $(4m)^p = 64m^3$

$$4^{\square} m^{\square} = 64m^3$$

\therefore nilai $P = \dots\dots$

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2. Sederhanakan bentuk eksponen berikut:

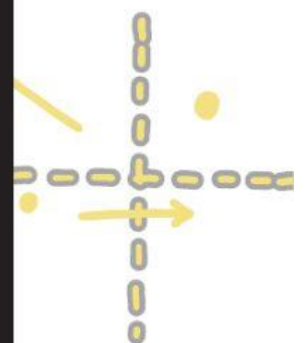
a. $\left(\frac{4^3 \times 2^6}{4^3 \times 2^3}\right)^2$

b. $(4u^4v^5)(8u^5v)$

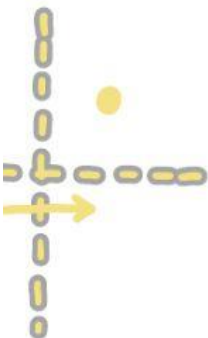


c. $\left(\frac{n^{-1}p^3}{4n^{-5}p^3}\right)^2, n \neq 0, p \neq 0$



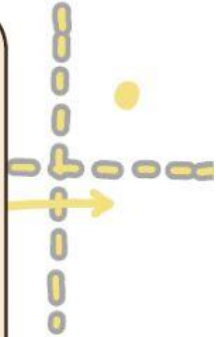

Penyelesaian:

$$\begin{aligned} \text{a. } & \left(\frac{4^3 \times 2^6}{4^3 \times 2^3}\right)^2 \\ &= (4^{3-\dots} \times 2^{6-\dots})^2 \\ &= (4^{\square} \times 2^{\square})^2 \\ &= 4^{\square} \times 2^{\square} \end{aligned}$$



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$$\begin{aligned} & \text{b. } (4u^4v^5)(8u^{-5}v) \\ &= (4 \times \dots\dots)(u^{4+\dots\dots}v^{5+\dots\dots}) \\ &= 32u^{\square}v^{\square} \\ &= 32 \times \left(\frac{1}{\square}\right)v^{\square} \\ &= \frac{32v^{\square}}{\square} \end{aligned}$$


$$\begin{aligned} & \text{c. } \left(\frac{n^{-1}p^3}{4n^{-5}p^3}\right)^2, n \neq 0, p \neq 0 \\ &= \left(\frac{1}{4}n^{-1-\dots\dots} \times p^{3-\dots\dots}\right)^2 \\ &= \left(\frac{1}{4}n^{\square}p^{\square}\right)^2 \end{aligned}$$