

Nama :

Kelas :

1. Sederhanakanlah bentuk eksponen berikut:

a. $(2^3)^4 \cdot (2^3)^{-5}$

$$\begin{aligned}(2^3)^4 \cdot (2^3)^{-5} &= (\square^\square) \cdot (\square^\square) \\ &= (\square^\square)\end{aligned}$$

b. $\frac{16 \cdot 2^8}{2^{10}}$

$$\begin{aligned}\frac{16 \cdot 2^8}{2^{10}} &= \frac{(\square^\square) \cdot (\square^\square)}{\square^\square} \\ &= \frac{(\square^\square)}{(\square^\square)} \\ &= \square^\square\end{aligned}$$

2. Nilai x yang memenuhi $5^{3x-2} = 25^{2x+1}$

$$5^{3x-2} = 25^{2x+1}$$

$$\square^\square = (\square^\square)^\square$$

$$\square^\square = \square^\square$$

$$\dots = \dots$$

$$\dots = \dots$$

$$x = \dots$$

3. Jika $x=27$, $y=36$ dan $z=3$. tentukanlah nilai

$$\frac{x^{\frac{2}{3}} \cdot y^{\frac{3}{2}}}{z^2}$$

$$\frac{x^{\frac{2}{3}} \cdot y^{\frac{3}{2}}}{z^2} = \frac{(\dots)^{\frac{2}{3}} \cdot (\dots)^{\frac{3}{2}}}{(\dots)^2}$$

$$= \frac{(\dots^\square)^{\frac{2}{3}} \cdot (\dots^\square)^{\frac{3}{2}}}{(\dots)^2}$$

$$= \frac{\square^\square \cdot \square^\square}{\square^\square}$$

$$= \square^\square \cdot \square^\square$$

4. Bentuk sederhana dari $4\sqrt{3} + 3\sqrt{12} - \sqrt{27}$

$$\begin{aligned}
 4\sqrt{3} + 3\sqrt{12} - \sqrt{27} &= 4\sqrt{3} + 3\sqrt{\dots \times \dots} - \sqrt{\dots \times \dots} \\
 &= \dots \sqrt{\dots} + \dots \times \dots \sqrt{\dots} - \dots \sqrt{\dots} \\
 &= (\dots + \dots - \dots) \sqrt{\dots} \\
 &= \dots \sqrt{\dots}
 \end{aligned}$$

5. Bentuk sederhana dari $\frac{6}{\sqrt{8} + \sqrt{5}}$

$$\begin{aligned}
 \frac{6}{\sqrt{8} + \sqrt{5}} &= \frac{\dots}{\sqrt{\dots} + \sqrt{\dots}} \times \frac{\sqrt{\dots} - \sqrt{\dots}}{\sqrt{\dots} - \sqrt{\dots}} \\
 &= \frac{\dots (\sqrt{\dots} - \sqrt{\dots})}{(\sqrt{\dots})^2 - (\sqrt{\dots})^2} \\
 &= \frac{\dots \sqrt{\dots} - \dots \sqrt{\dots}}{\dots - \dots} \\
 &= \frac{\dots \sqrt{\dots} - \dots \sqrt{\dots}}{\dots} \\
 &= \dots \sqrt{\dots} - \dots \sqrt{\dots}
 \end{aligned}$$