

TOPIK : INDEKS

1. Simplify $\left(\frac{a^3}{b}\right)^2 \times \frac{b}{c^2} \times \frac{c^3}{a^2} =$

Permudahkan $\left(\frac{a^3}{b}\right)^2 \times \frac{b}{c^2} \times \frac{c^3}{a^2} =$

A $\frac{a^4 c}{b}$

C $a^4 c$

B $\frac{a^3 c}{b}$

D $a^3 c$

2. Given that $\frac{9}{t^3} = 9^{-\frac{1}{2}}$, find the value of t.

Diberi bahawa $\frac{9}{t^3} = 9^{-\frac{1}{2}}$, cari nilai t.

A $t = 2$

C $t = 4$

B $t = 3$

D $t = 5$

3. Simplify $(4m^{-2}n)^3 \times \frac{1}{2}m^2n^{-1}$

Permudahkan $(4m^{-2}n)^3 \times \frac{1}{2}m^2n^{-1}$

A $32m^{-4}n^2$

C $m^{-4}n^2$

B $32m^{-8}n^4$

D $m^{-8}n^4$

4.

$$\frac{(3^2 \times 4^{-1})^{\frac{1}{2}}}{\sqrt{(9 \times 2^{-4})}}$$

- A 1
B 2

- C 18
D 72

5. If $4^{-\frac{3}{2}} = \left(\frac{1}{2}\right)^n$, n is

Jika $4^{-\frac{3}{2}} = \left(\frac{1}{2}\right)^n$, n ialah

- A 1
B 3

- C 5
D 7

6.

$$\frac{(25x^{-2}y^3)^{\frac{1}{2}}}{x^3y^{-\frac{1}{2}}} =$$

A $5x^3y^2$

C $5\left(\frac{y}{x}\right)^2$

B $5\frac{y^{\frac{3}{2}}}{x^5}$

D $5\frac{y^2}{x^4}$

7. Given $9^{\frac{1}{2}} \times 3^m = 27^m$, find the value of m.

Diberi $9^{\frac{1}{2}} \times 3^m = 27^m$, cari nilai m.

A $-\frac{1}{2}$

C 1

B $\frac{1}{2}$

D 3

8. Given that $7(2^2) + 2^2 = \frac{4^x}{4^2}$, find the value of x.

Diberi $7(2^2) + 2^2 = \frac{4^5}{4^x}$, cari nilai x.

A 4

C 1

B 2

D 0

9. Simplify:

Permudahkan:

$$\frac{(3pq^4)^2}{3p^3q^8} =$$

A $p^{-2}q^{-4}$

C $3p^{-2}q^{-4}$

B p^{-1}

D $3p^{-1}$

10. Given that $125^{2k} = 5^{k+2}$, find the value of k.

Diberi bahawa $125^{2k} = 5^{k+2}$, cari nilai k.

A $-\frac{2}{5}$

C $\frac{2}{5}$

B $\frac{2}{7}$

D $\frac{1}{2}$