Bab 1 Indeks / Indices

BAHAGIAN/*SECTION* A

Arahan: Jawab **semua** soalan.
Instruction: *Answer* **all** *questions.*

1 1.1 Cari nilai bagi 2^5.
Find the value of 2^5.
A 10 C 32
B 25 D 50

2 1.1 Cari nilai bagi $b \times b \times b$.
Find the value of $b \times b \times b$.
A $3b$ C $3b^3$
B b^3 D $3b^{-3}$

3 1.2 Cari nilai bagi $(2a^3)^3$.
Find the value of $(2a^3)^3$.
A $2a^6$ C $8a^6$
B $2a^9$ D $8a^9$

4 1.2 Permudahkan $a^3 \times a$.
Simplify $a^3 \times a$.
Modul Hebat Gangsa
A a^2 C $2a^3$
B a^4 D $2a^4$

5 1.2 Cari nilai bagi $\frac{1}{x^5}$.
Find the value of $\frac{1}{x^5}$.
A $\sqrt[2]{x}$ C x^5
B x^{-5} D $\sqrt{x^5}$

6 1.2 Permudahkan $20n^2 \div 5n^0$.
Simplify $20n^2 \div 5n^0$.
Modul Hebat Gangsa
A $4n^2$ C $4n$
B $4n^0$ D $4n^{-2}$

7 1.2 Cari nilai bagi $8^{\frac{2}{3}}$.
Find the value of $8^{\frac{2}{3}}$.
A 6
B 4
C $\sqrt{24}$
D $\sqrt[3]{16}$

8 1.2 Cari nilai bagi $\frac{8^2}{8}$.
Find the value of $\frac{8^2}{8}$.
A 1 C 64
B 8 D 512

9 1.2 $36^{-\frac{1}{2}} =$
Modul Hebat Gangsa
A $\frac{1}{36^{\frac{1}{2}}}$
B $-\frac{1}{36^{\frac{1}{2}}}$
C $-\frac{1}{36^2}$
D $\frac{1}{36^2}$

10 1.2 $m^{\frac{2}{5}}$ boleh ditulis sebagai _____.
$m^{\frac{2}{5}}$ *can be written as* _____.
A $\sqrt[5]{m^{-2}}$
B $\sqrt[5]{m^2}$
C $\frac{1}{\sqrt[5]{m^{-2}}}$
D $\frac{1}{\sqrt[5]{m^2}}$

11 1.2 Jika $a^6 \times a^{-x} = a^{-7}$, tentukan nilai x.
If $a^6 \times a^{-x} = a^{-7}$, *determine the value of* x.
A -13 C 1
B -1 D 13

12 1.2 Permudahkan:
Simplify:
Modul Hebat Gangsa
$20a^{16} \div 2a^8$
A $20a^2$ C $10a^2$
B $20a^8$ D $10a^8$

13 1.2 Permudahkan:
Simplify:
$(-5p^2rs^2)^3$
A $-5p^2rs^5$ C $-125p^5rs^5$
B $-5p^6rs^6$ D $-125p^6r^3s^6$

14 1.2 Permudahkan:
Simplify:
$\left(\frac{3}{4^2}\right)^3$
A $\left(\frac{3}{1\,024}\right)$ C $\left(\frac{9}{4\,096}\right)$
B $\left(\frac{27}{1\,024}\right)$ D $\left(\frac{27}{4\,096}\right)$

15 1.2 Ringkaskan:
Simplify:
Modul Hebat Perak
$\left(\frac{3h^3}{h^2}\right)^2 \div h^2$
A 9 C $3h^2$
B $9h$ D $9h^2$

16 1.2 Cari nilai bagi $\left(\frac{9}{9^2}\right)^{\frac{1}{2}}$.
Find the value of $\left(\frac{9}{9^2}\right)^{\frac{1}{2}}$.
A 1 C $\frac{1}{3}$
B 3 D $\frac{1}{9}$

17 1.2 Permudahkan:
Simplify:
Modul Hebat Gangsa
$v^7 \div v^{-7}$
A v C v^7
B v^0 D v^{14}

18 1.2 Tentukan nilai x bagi persamaan yang berikut.
Determine the value of x *for the following equation.*
$a^x \times a^2 \times a^1 = a^5$
A 1 C 3
B 2 D 5

19 1.2 $25^{\frac{3}{2}} = \sqrt[b]{a^c}$
Klon PTS 2019
A $a = 25, b = 3, c = 2$
B $a = 25, b = 2, c = 3$
C $a = 2, b = 25, c = 3$
D $a = 3, b = 25, c = 2$

BAHAGIAN/ *SECTION* B

Arahan: Jawab **semua** soalan.
Instruction: *Answer* **all** *questions.*

20 (a) Bulatkan jawapan yang betul.
1.2 *Circle the correct answers.*

Modul Hebat Gangsa

Jawapan/*Answer:*

[3 *markah/marks*]

	Jawapan *Answer*		
$3m^4 \times 4m^5 =$	$12m^{20}$	$12m^9$	$12m$
$p^{16} \div p^7 =$	p^1	p^3	p^9
$\frac{q^7r^2}{q^5r^4} =$	q^2r^{-2}	q^2r^2	$q^{-2}r^2$

(b) Lengkapkan jadual di bawah.
1.2 *Complete the table below.*

Modul Hebat Perak

Jawapan/*Answer:*

Nombor dalam tatatanda indeks *Number in index notation*	Asas *Base*	Indeks *Index*
$(-0.7)^3$		

[1 *markah/mark*]

21 (a) Padankan setiap yang berikut dengan jawapan yang betul.
1.2 *Match each of the following with the correct answer.*

Modul Hebat Perak

Jawapan/*Answer:*

[2 *markah/marks*]

$64^{\frac{3}{2}}$

$243^{\frac{4}{5}}$

$\left(\sqrt[5]{243}\right)^4$

$\left(\sqrt[3]{64}\right)^2$

$\left(\sqrt[4]{243}\right)^5$

$\left(\sqrt[2]{64}\right)^3$

(b) Tentukan nilai bagi x dalam persamaan yang berikut.
1.2 *Determine the values of x in the following equations.*

[2 *markah/marks*]

Modul Hebat Gangsa Jawapan/*Answer:*

$s^5 \times s^0 \times s = s^x$	$x =$ _____
$(-1^2)^{15} = -1^x$	$x =$ _____

22 (a) Tentukan sama ada persamaan berikut adalah **Benar** atau **Palsu**.
1.2 *Determine whether the following equations are* **True** *or* **False**.

[2 *markah/marks*]

Modul Hebat Gangsa Jawapan/*Answer:*

Persamaan *Equation*	**Benar atau Palsu** *True or False*
$(2^5)^2 = (4^2)^3$	
$(5^4)^3 = (125^2)^2$	

(b) Isikan jawapan yang betul dalam kotak di bawah.
1.2 *Fill in the correct answers in the boxes below.*

[2 *markah/marks*]

Modul Hebat Perak Jawapan/*Answer:*