PRAKTIS

1 Indeks
Indices

BAHAGIAN A

1. Antara berikut, yang manakah benar?
Which of the following is true?
A $m \times m \times m = 3m$
B $m \times m \times m = 3^m$
C $m \times m \times m = m^3$
D $m \times m \times m = 3m^3$

Memahami | SP1.1.1 | Aras R

2. Antara berikut, yang manakah ialah $7t^2$?
Which of the following is $7t^2$?
A $7 \times 7 \times t \times t$
B $7t \times 7t$
C $7 + t \times t$
D $7 \times t \times t$

Memahami | SP1.1.1 | Aras R

3. Bentuk tatatanda indeks yang betul bagi pendaraban berulang $\left(-\frac{1}{2}h\right) \times \left(-\frac{1}{2}h\right) \times \left(-\frac{1}{2}h\right)$ ialah
The correct index notation for repeated multiplication of $\left(-\frac{1}{2}h\right) \times \left(-\frac{1}{2}h\right) \times \left(-\frac{1}{2}h\right)$ is
A $\left(-\frac{1}{2}h\right)^3$
B $-\left(\frac{h}{2}\right)^3$
C $-\frac{1}{2}h^3$
D $-\frac{1}{6}h^3$

Memahami | SP1.1.1 | Aras R

4. $4p^2 \times 5p^3 =$
A $20p^5$
B $20p^6$
C $9p^5$
D $9p^6$

Mengaplikasi | SP1.2.1 | Aras R

5. Antara berikut, yang manakah sama nilai dengan $16^{\frac{3}{4}}$?
Which of the following has the same value as $16^{\frac{3}{4}}$?
A 4^3
B 8^3
C $32^{\frac{1}{2}}$
D $64^{\frac{1}{2}}$

Mengaplikasi | SP1.2.5 | Aras S

6. Diberi $\left(\frac{2}{5}\right)^n = \frac{8}{125}$, cari nilai n.
Given $\left(\frac{2}{5}\right)^n = \frac{8}{125}$, find the value of n.
A 2
B 3
C 4
D 5

Mengaplikasi | SP1.1.2 | Aras R

7. Permudahkan.
Simplify.

$$\frac{k^4 \times 2k^{-2}}{4k}$$

A $\frac{1}{2}k$ **B** $-\frac{1}{2}h$
C $\frac{1}{4}k^2$ **D** $-\frac{1}{4}k^2$

Mengaplikasi | SP1.2.6 | Aras R

8. Permudahkan.
Simplify.

$$(5g^2)^3 \div 25g^{-4}$$

A $\frac{1}{5}g^{10}$ **B** $\frac{1}{5}g^2$
C $5g^{10}$ **D** $5g^2$

Mengaplikasi | SP1.2.6 | Aras S

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9. $(81a^8)^{-\frac{1}{4}} =$

A $\frac{1}{3a}$

B $\frac{1}{3a^2}$

C $3a$

D $3a^2$

Mengaplikasi | SPI 2.6 | Aras S

10. Tentukan nilai p bagi $w^{3p} \times 2w^{6-4p} = 2$.
Determine the value of p for $w^{3p} \times 2w^{6-4p} = 2$.

A -3

B -1

C 6

D 7

Mengaplikasi | SPI 2.7 | Aras T

BAHAGIAN B

11. (a) Berikut adalah pendaraban nombor dalam bentuk indeks yang mempunyai asas yang sama. Tentukan sama ada setiap persamaan berikut benar atau palsu.
The following is the multiplication of numbers in index form with the same base. Determine whether each of the following equations is true or false.

Mengaplikasi | SPI 2.1 | Aras S [2 *markah*/2 *marks*]

Jawapan/*Answer*:

	Persamaan *Equation*	Benar/Palsu *True/False*
(i)	$m^2 \times m^4 = m^6$	
(ii)	$t^{-5} \times t^7 = t^2$	

(b) Tandakan (✓) untuk nilai h yang betul dan (✗) untuk nilai h yang salah.
Mark (✓) for the correct value of h and (✗) for the incorrect value of h.

Mengaplikasi | SPI 2.5 | Aras S [2 *markah*/2 *marks*]

Jawapan/*Answer*:

	Persamaan *Equation*	Nilai h *Value of h*	✓ atau/*or* ✗
(i)	$(h^2)^{\frac{1}{2}} = 8$	$h = 4$	
(ii)	$(5^h)^{-4} = 125$	$h = -\frac{3}{4}$	

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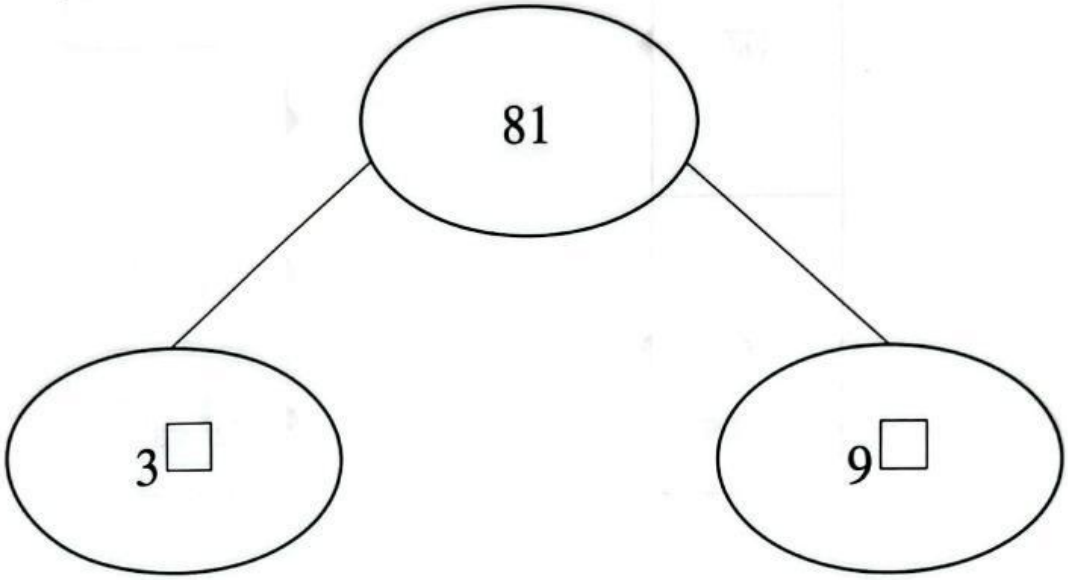
12. (a) Berdasarkan nombor yang diberikan, isikan tempat kosong dengan indeks yang betul.
Based on the given numbers, fill in the blanks with the correct indices.

2	3	4	5

Mengaplikasi SP1.1.2 Aras R [2 *markah*/2 *marks*]

Jawapan/*Answer*:



(b) Tandakan (✓) pada langkah pengiraan yang betul bagi pembahagian nombor dalam bentuk indeks yang diberi.
Mark (✓) on the correct step of calculation for the given division of number in index form.

Mengaplikasi SP1.2.2 Aras R [2 *markah*/2 *marks*]

Jawapan/*Answer*:

$$\frac{6^5}{6^3}$$

Langkah pengiraan *Step of calculation*	**Tandakan (✓)** *Mark (✓)*
$\frac{6 \times 5}{6 \times 3}$	
6^{5+3}	
$\frac{6 \times 6 \times 6 \times 6 \times 6}{6 \times 6 \times 6}$	
6^{5-3}	

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13. Padankan nombor dalam bentuk indeks yang setara.
Match the equivalent numbers in index form.

Mengaplikasi | SP1.2.6 | Aras S [4 *markah*/4 *marks*]

Jawapan/*Answer*:

$\sqrt[3]{6^2}$	$(\sqrt{6})^3$
$\sqrt{6^3}$	$\left(6^{\frac{1}{3}}\right)^2$
	$(3 \times 2)^{\frac{2}{3}}$
	$\left(2^{\frac{1}{2}} \times 3^{\frac{1}{2}}\right)^3$

14. Tentukan sama ada setiap ayat matematik yang berikut betul atau salah.
State whether each of the following number sentences is correct or incorrect.

Mengaplikasi | SP1.2.6 | Aras R [4 *markah*/4 *marks*]

Jawapan/*Answer*:

(a) $49 = 7^2$	Betul / Salah *Correct / Incorrect*
(b) $3 \times 3 \times 3 \times 3 \times 3 = 3^5$	Betul / Salah *Correct / Incorrect*
(c) $4^0 = 4 \times 0$	Betul / Salah *Correct / Incorrect*
(d) $\frac{1}{4^3} = 4^{-\frac{1}{3}}$	Betul / Salah *Correct / Incorrect*

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