KEMENTERIAN PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA JABATAN MATEMATIK, SAINS DAN KOMPUTER		COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
		COURSEWORK ASSESSMENT		TUTORIAL 3	
		SESSION		DECEMBER 2018	
		DURATION	60 MINS	CLO1	10 MARKS
NAME	SYUHADAH AQILAH			CLO2	
REGISTRATION NO.	OSBIPP16F2002			CLO3	
PROGRAMME/ SECTION	IPP1	TOTAL MARKS		10 MARKS	

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C1 [1 mark]

(a) Fill in missing index number.

$2^{\square} \times 2^4 \div 2^5 = 2^{10}$

CLO1, C2 [2 marks]

(b) Simplify the indices in the lowest form.

$8 \times (8^2)^4 \div 8^3$

Question 2

CLO1, C1 [1 mark]

(a) Rewrite the expression as single exponent.

$19^2 \times 19^0 \div 19^4$

CLO1, C2 [3 marks]

(b) Simplify the following indices in the lowest form.

$$\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$$

Question 3

CLO1, C3 [3 marks]

Calculate the following without using calculator.

$3^{x-2} = 27^{x+4}$

Q1

(a)

$2^x \times 2^{4-5} = 2^{10}$

$x - 1 = 10$

$x - 1 + 1 = 10 + 1$

$x = 11$

$2^{11} \times 2^4 \div 2^5 = 2^{10}$

(b) $8 \times (8^2)^4 \div 8^3$

$= 8 \times 8^8 \div 8^3$

$= 1 + 8 - 3$

$= 6$ #

Q2 (a) $19^2 \times 19^0 \div 19^4$

$= 19^{2+0-4}$ ✓

$= 19^{-2}$ ✓ (2)

$= \frac{1}{19^{+2}}$ ✗ (1)

Q2 (b)

$\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$

$2 \times 2 = 4^2$

$4 \div 2 = 2^2$

$\frac{2^{n+2} \times (4^2)^{3-2n}}{(2^3)^{3n}}$

$\frac{2^{n+2} \times 2^{6-4n}}{2^{9n}}$ ✓

$= \frac{2}{2^{9n}}$ ✗

Q3

$3^{x-2} = 27^{x+4}$

$3^{x-2} = (3^3)^{x+4}$

$3^{x-2} = 3^{3x+12}$

$3 \times 3 = 27^3$

$27 \div 9 = 3$

$x - 2 = 3x + 12$

$x - 2 + 2 = 3x + 12 + 2$

$x = 3x + 14$

$x - 3x = 3x - 3x + 14$ ✓ (4)

$\frac{-2x}{-2} = \frac{14}{-2}$ $\Rightarrow x = -7$ ✗

KEMENTERIAN PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA		COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS
		COURSEWORK ASSESSMENT		TUTORIAL 3
		SESSION		DECEMBER 2018
JABATAN MATEMATIK, SAINS DAN KOMPUTER		DURATION: 60 MINS	CLO1	10 MARKS
NAME	Sandra Ipoh No		CLO2	
REGISTRATION NO.	051PP18F2024		CLO3	
PROGRAMME/ SECTION	IPP1	TOTAL MARKS	10 MARKS	

10

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C1 [1 mark]

(a) Fill in missing index number.

$2^{\square} \times 2^4 \div 2^5 = 2^{10}$

CLO1, C2 [2 marks]

(b) Simplify the indices in the lowest form.

$8 \times (8^2)^4 \div 8^3$

Question 2

CLO1, C1 [1 mark]

(a) Rewrite the expression as single exponent.

$19^2 \times 19^0 \div 19^4$

CLO1, C2 [3 marks]

(b) Simplify the following indices in the lowest form.

$$\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$$

Question 3

CLO1, C3 [3 marks]

Calculate the following without using calculator.

$3^{x-2} = 27^{x+4}$

Question 1

a) $2^x \times 2^4 \div 2^5 = 2^{10}$

$2^x \times 2^{4-5} = 2^{10}$

$2^x \times 2^{-1} = 2^{10}$ (1)

$x - 1 = 10$

$x - 1 + 1 = 10 + 1$

$x = 11$

b)

$8 \times (8^2)^4 \div 8^3$

$= 8 \times 8^{2\times4} \div 8^3$

$= 8 \times 8^8 \div 8^3$

$= 8 \times 8^{8-3}$

$= 8 \times 8^5$ ✓

$= 8^{1+5}$

$= 8^6$ (2)

Question 2

a) $19^2 \times 19^0 \div 19^4$

19^{2+0-4}

$= 19^{-2}$ (1)

$= \frac{1}{19^2}$ ✓

b) $\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$

$= \frac{2^{n+2} \times (2^2)^{3-2n}}{(2^3)^{3n}}$

$= \frac{2^{n+2} \times 2^{6-4n}}{2^{9n}}$

$= 2^{n+2+6-4n-9n}$

$= 2^{-3n+8-9n}$

$= 2^{-12n+8}$ ✓ (3)

Question 3

$3^{x-2} = 27^{x+4}$

$3^{x-2} = (3^3)^{x+4}$

$3^{x-2} = 3^{3x+12}$

$x - 2 = 3x + 12$

$x - 2 = 3x - 3x + 12$

$x - 3x - 2 = 12$

$-2x - 2 + 2 = 12 + 2$

$\frac{-2x}{-2} = \frac{14}{-2}$

$x = -7$

3

KEMENTERIAN PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA		COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS
		COURSEWORK ASSESSMENT		TUTORIAL 3
		SESSION		DECEMBER 2018
JABATAN MATEMATIK, SAINS DAN KOMPUTER		DURATION	60 MINS	CLO1 10 MARKS
NAME	Celybia Chu Wei Jyi			CLO2
REGISTRATION NO.	051PP18F2028			CLO3
PROGRAMME/ SECTION	IPP1	TOTAL MARKS		10 MARKS

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C1 [1 mark]

(a) Fill in missing index number.

$2^{\square} \times 2^4 \div 2^5 = 2^{10}$

CLO1, C2 [2 marks]

(b) Simplify the indices in the lowest form.

$8 \times (8^2)^4 \div 8^3$

Question 2

CLO1, C1 [1 mark]

(a) Rewrite the expression as single exponent.

$19^2 \times 19^0 \div 19^4$

CLO1, C2 [3 marks]

(b) Simplify the following indices in the lowest form.

$$\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$$

Question 3

CLO1, C3 [3 marks]

Calculate the following without using calculator.

$3^{x-2} = 27^{x+4}$

Question 1

(a) $x + 4 - 5 = 10$

$x - 1 + 1 = 10 + 1$

$x = 11$

Question 2

(a) $19^2 \times 19^0 \div 19^4$

$= 19^{2+0-4}$

$= 19^{-2}$

$= \frac{1}{19^2}$

(b) $8 \times (8^2)^4 \div 8^3$

$= 8^{1+8-3}$

$= 8^6$

(b) $\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$

$= \frac{2^{n+2} \times (2^2)^{3-2n}}{(2^3)^{3n}}$

$= \frac{2^{n+2} \times 2^{6-4n}}{2^{9n}}$

$= 2^{n+2+6-4n-9n}$

$= 2^{n-4n-9n+2+6}$

$= 2^{-12n+8}$

Question 3

$3^{x-2} = 27^{x+4}$

$3^{x-2} = (3^3)^{x+4}$

$3^{x-2} = 3^{3x+12}$

$x - 2 = 3x + 12$

$x - 2 + 2 = 3x + 12 + 2$

$x - 3x = 3x + 14$

$-2x = 3x - 3x + 14$

$\frac{-2x}{-2} = \frac{14}{-2}$

$x = -7$

KEMENTERIAN PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA		COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
		COURSEWORK ASSESSMENT		TUTORIAL 3	
		SESSION		DECEMBER 2018	
JABATAN MATEMATIK, SAINS DAN KOMPUTER		DURATION	60 MINS	CLO1	10 MARKS
NAME	Jessica ak linggang			CLO2	
REGISTRATION NO.	051PP18F2007			CLO3	
PROGRAMME/ SECTION	IPP1	TOTAL MARKS		10 MARKS	

9/2

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C1 [1 mark]

(a) Fill in missing index number.

$2^{\square} \times 2^4 \div 2^5 = 2^{10}$

CLO1, C2 [2 marks]

(b) Simplify the indices in the lowest form.

$8 \times (8^2)^4 \div 8^3$

Question 2

CLO1, C1 [1 mark]

(a) Rewrite the expression as single exponent.

$19^2 \times 19^0 \div 19^4$

CLO1, C2 [3 marks]

(b) Simplify the following indices in the lowest form.

$$\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$$

Question 3

CLO1, C3 [3 marks]

Calculate the following without using calculator.

$3^{x-2} = 27^{x+4}$

Question 1

a) $x + 4 - 5 = 10$

$x = 10 + 1$

$x = 11$ (1)

b) $8 \times 8^8 \div 8^3$

$= 8^{(1+8-3)}$

$= 8^6$ (2)

Question 2.

a) $19^2 \times 19^0 \div 19^4$

$= 19^{(2+0-4)}$

$= 19^{-2}$ (2)

b) $\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$

$= \frac{2^{n+2} \times 2^{2(3-2n)}}{2^{3(3n)}}$

$= 2^{(n+2)+(6-4n)-9n)}$

$= 2^{(n-4n-9n)+(2+6)}$

$= 2^{-12n+8}$

$= 2^{8-12n}$ (3)

Question 3

a) $3^{x-2} = 27^{x+4}$

$= 3^{x-2} = 3^{(x+4)}$

$x - 2 = 3x + 12$

$3x + 12 = x - 2$

$3x - x = -2 - 12$

$\frac{2x}{2} = \frac{-14}{2}$

$x = -7$ (3)

Nurul

KEMENTERIAN PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA — JABATAN MATEMATIK, SAINS DAN KOMPUTER		COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
		COURSEWORK ASSESSMENT		TUTORIAL 3	
		SESSION		DECEMBER 2018	
		DURATION	60 MINS	CLO1	10 MARKS
NAME	Nurul Aina bt Ahmad			CLO2	
REGISTRATION NO.	051PP18F2016			CLO3	
PROGRAMME/ SECTION	IPP1	TOTAL MARKS		10 MARKS	

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C1 [1 mark]

(a) Fill in missing index number.

$2^{\square} \times 2^4 \div 2^5 = 2^{10}$

CLO1, C2 [2 marks]

(b) Simplify the indices in the lowest form.

$$8 \times (8^2)^4 \div 8^3$$

Question 2

CLO1, C1 [1 mark]

(a) Rewrite the expression as single exponent.

$$19^2 \times 19^0 \div 19^4$$

CLO1, C2 [3 marks]

(b) Simplify the following indices in the lowest form.

$$\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$$

Question 3

CLO1, C3 [3 marks]

Calculate the following without using calculator.

$$3^{x-2} = 27^{x+4}$$

Question 1

a) $2^{\square} \times 2^4 \div 2^5 = 2^{10}$

$x - 1 = 10$

$x - 1 + 1 = 10 + 1$

$x = 11$

$2^{11} \times 2^4 \div 2^5 = 2^{10}$

(b) $8 \times (8^2)^4 \div 8^3$

$= 8^{1+2(4)-3}$

$= 8^6$

Question 2

a) $19^2 \times 19^0 \div 19^4$

$= 19^{2+0-4}$

$= 19^{-2}$

$= \frac{1}{19^2}$

(b)

$$\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$$

$$= \frac{2^{n+2} \times 2^{2(3-2n)}}{2^{3(2n)}}$$

$$= \frac{2^{n+2} \times 2^{6-4n}}{2^{6n}}$$

$$= 2^{n+2+(6-4n)-6n}$$

$$= 2^{8-9n}$$

Question 3.

$3^{x-2} = 27^{x+4}$

$3^{x-2} = 3^{3x+12}$

$x - 2 = 3x + 12$

$\frac{2x}{2} = \frac{-14}{2}$

$x = -7$

✓ 7

KEMENTERI/ PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA JABATAN MATEMATIK, SAINS DAN KOMPUTER		COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS
		COURSEWORK ASSESSMENT		TUTORIAL 3
		SESSION		DECEMBER 2018
NAME	Celestina Inaica	DURATION	60 MINS	CLO1 10 MARKS
REGISTRATION NO.	DS1PP18F2024			CLO2
PROGRAMME/ SECTION	IPP1	TOTAL MARKS		CLO3 10 MARKS

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C1 [1 mark]

(a) Fill in missing index number.

$2^{\square} \times 2^4 \div 2^5 = 2^{10}$

CLO1, C2 [2 marks]

(b) Simplify the indices in the lowest form.

$8 \times (8^2)^4 \div 8^3$

Question 2

CLO1, C1 [1 mark]

(a) Rewrite the expression as single exponent.

$19^2 \times 19^0 \div 19^4$

CLO1, C2 [3 marks]

(b) Simplify the following indices in the lowest form.

$$\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$$

Question 3

CLO1, C3 [3 marks]

Calculate the following without using calculator.

$3^{x-2} = 27^{x+4}$

9) $2^{\square} \times 2^4 \div 2^5 = 2^{10}$

5) $8 \times (8^2)^4 \div 8^3$

$= 8^1 \times 8^8 \div 8^3$

$= 8^{(1+8)-3}$

$= 8^6$ 2

2a) $19^2 \times 19^0 \div 19^4$

$= 19^{(2-0)} \div 19^4$

$= 19^{-2}$ 2

5) $\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$ 1

$= \frac{2^{n+2} \times (2^2)^{3-2n}}{(2^3)^{3n}}$

3a) $3^{x-2} = 27^{x+4}$

$3^{x-2} = 3^{3x+12}$

$x - 2 = 3x + 12$

$x - 3x - 2 = 12 + 12$

$-2x = 12 + 12$

$\frac{-2x}{-2} = \frac{14}{-2}$ 3

$x = -7$

Incomplete.

KEMENTERIAN PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA — JABATAN MATEMATIK, SAINS DAN KOMPUTER		COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS
		COURSEWORK ASSESSMENT		TUTORIAL 3
		SESSION		DECEMBER 2018
NAME	MELLINA THERENY	DURATION	60 MINS	CLO1 / 10 MARKS
REGISTRATION NO.	051PP18F2019			CLO2
PROGRAMME/ SECTION	IPP1	TOTAL MARKS		CLO3 / 10 MARKS

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C1 [1 mark]

(a) Fill in missing index number.

$2^{\square} \times 2^4 \div 2^5 = 2^{10}$

CLO1, C2 [2 marks]

(b) Simplify the indices in the lowest form.

$8 \times (8^2)^4 \div 8^3$

Question 2

CLO1, C1 [1 mark]

(a) Rewrite the expression as single exponent.

$19^2 \times 19^0 \div 19^4$

CLO1, C2 [3 marks]

(b) Simplify the following indices in the lowest form.

$$\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$$

Question 3

CLO1, C3 [3 marks]

Calculate the following without using calculator.

$3^{x-2} = 27^{x+4}$

Question 1

a) $2^{\square} \times 2^4 \div 2^5 = 2^{10}$

$= 2^{11} \times 2^4 \div 2^5 = 2^{10}$

$= 2^{11+4-5} = 2^{10}$

b) $8 \times (8^2)^4 \div 8^3$

$= 8 \times 8^{2\times4} \div 8^3$

$= 8 \times 8^8 \div 8^3$

$= 8^{1+8} \div 8^3$

$= 8^9 \div 8^3 = 8^{9-3}$

$= 8^6$

Question 2

a) $19^2 \times 19^0 \div 19^4$

$= 19^{2+0-4}$

$= 19^{-2}$

$= \frac{1}{19^2}$

b) $\frac{2^{n+2} \times 4^{3-2n}}{8^{3n}}$

$= \frac{2^{n+2} \times (2^2)^{3-2n}}{(2^3)^{3n}}$

$= 2^{n+2} \times (2^2)^{3-n} \div (2^3)^{3n}$

Question 3

$3^{x-2} = 27^{x+4}$

$3^{x-2} = 3^{3(x+4)}$

$= 3^{6+4n}$

$2^{n+2} \times 2^{4n} \div 2^{9n}$

$= 2^{n+2+6-4n}$

$= 2^{-3n+8-9n}$

$= 2^{-3n-9n+8}$

$= 2^{-12n+8}$

Question 3

$3^{x-2} = 27^{x+4}$

$3^{x-2} = (3^3)^{x+4}$ ✓

$3^{x-2} = 3^{3x+4}$ ✗

$x - 2 = 3x + 4$

$x - 3x - 2 = 3x - 3x + 4$

$x - 3x - 2 + 2 = 4 + 2$

$\frac{-2x}{-2} = \frac{6}{-2}$

$x = -3$

$x = \frac{1}{x^3}$

1/2