

 KEMENTERIAN PENDIDIKAN MALAYSIA  JABATAN MATEMATIK, SAINS DAN KOMPUTER	COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
	COURSEWORK ASSESSMENT		TUTORIAL 1	
	SESSION		DECEMBER 2018	
	DURATION	CLO1	10 MARKS	
		CLO2	10	
		CLO3		
NAME	Roslind Jelvie	60 MINS	TOTAL MARKS	
REGISTRATION NO.	051PP18F2011		10 MARKS	
PROGRAMME/ SECTION	IPP1			

*Grade: 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

[2 marks]

- (a) Given the expression $x^2 + 5xy - 3$. Identify the total variable term(s) and constant term(s) in this expression.

CLO1, C2

[2 marks]

- (b) Simplify the expression $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$.

Question 2

CLO1, C2

[3 marks]

Simplify the polynomial $3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$.

Question 3

CLO1, C3

[3 marks]

Use polynomial division to simplify the following.

$$\begin{array}{r} n^2 + 10n + 18 \\ \hline n + 5 \end{array}$$

Question 1

a) $x^2 + 5xy - 3$

Terms Terms Terms

2 variable terms 1 constant

The answer is 2 variable terms and 1 constant.

Question 2

b) $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$

$$\begin{aligned}
 &= 11c^5 - 9c^6 + 15c^5 + 4c - 6c^2 \\
 &= -9c^6 + 11c^5 + 15c^5 - 6c^2 + 4c \\
 &= -9c^6 + 26c^5 - 6c^2 + 4c
 \end{aligned}$$

✓ 2

Question 2

$$3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x) = 3x^4 + 3x^3 + 6x^2 - x^4 - 2x^3 + 2x$$

$$= 3x^4 - x^4 + 3x^3 - 2x^3 + 6x^2 + 2x$$

$$= 2x^4 + x^3 + 6x^2 + 2x$$

✓ (3)

Question 3

$$\frac{n^2 + 10n + 18}{n+5}$$

$$\begin{array}{r} n+5 \quad | \quad n^2 + 10n + 18 \\ \quad - n^2 - 5n \\ \hline \quad \quad \quad 5n + 18 \\ \quad - 5n - 25 \\ \hline \quad \quad \quad -7 \end{array}$$

Answers: $n+5$

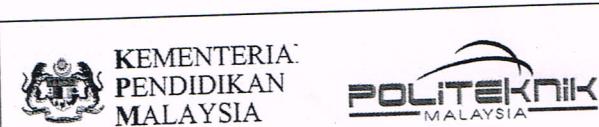
$$n \rightarrow n^2$$

$$(10 - 5) : 5 = 5$$

$$n \rightarrow 5n$$

$$18 - (-25) = 43$$

✓ (3)



JABATAN MATEMATIK, SAINS DAN KOMPUTER

NAME	sandra ipah anak na
REGISTRATION NO.	05 IPP18F2024
PROGRAMME/ SECTION	IPP1A

COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
COURSEWORK ASSESSMENT		TUTORIAL 1	
SESSION		DECEMBER 2018	
DURATION	60 MINS	CLO1	10 MARKS
		CLO2	
		CLO3	
TOTAL MARKS		10 MARKS	

(10) Good

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

CL01, C1

- (a) Given the expression $x^2 + 5xy - 3$. Identify the total variable term(s) and constant term(s) in this expression.

[2 marks]

CL01, C2

- (b) Simplify the expression $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$.

[2 marks]

Question 2

CL01, C2

Simplify the polynomial $3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$.

[3 marks]

Question 3

CL01, C3

Use polynomial division to simplify the following.

$$\frac{n^2 + 10n + 18}{n+5}$$

[3 marks]

Question 1

$$a) \overbrace{x^2 + 5xy}^{\text{variable}} - 3$$

$x^2, 5xy = \text{variable terms}$

$-3 = \text{constant term}$

variable term = 2

constant term = 1 (2)

$$\begin{aligned}
 b) & 11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2) \\
 & = 11c^5 - 9c^6 + 15c^5 + 4c - 6c^2 \\
 & = 11c^5 + 15c^5 - 9c^6 - 6c^2 + 4c \\
 & = 26c^5 - 9c^6 - 6c^2 + 4c
 \end{aligned}$$

(2)

$$\begin{aligned}
 & 3x^4 + 3x^3 + 6x^2 - x^4 + \\
 & = 3x^4 + 3x^3 + 6x^2 - x^4 +
 \end{aligned}$$

Question 2

$$\begin{aligned}
 & 3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x) \\
 &= 3x^4 + 3x^3 + 6x^2 - x^4 - 2x^3 + 2x \\
 &= 3x^4 - x^4 + 3x^3 - 2x^3 + 6x^2 + 2x \\
 &= 2x^4 + x^3 + 6x^2 + 2x
 \end{aligned}$$

(3)

Question 3

$$\begin{array}{r}
 n+5 \\
 \overline{n+5} \Big| n^2 + 10n + 18 \\
 -) n^2 + 5n \\
 \hline
 -) 5n + 18 \\
 -) 5n + 25 \\
 \hline
 -7
 \end{array}$$

(3)

① Nur Iyazi

② Syukhadah

KEMENTERIAN PENDIDIKAN MALAYSIA	POLITEKNIK MALAYSIA	COURSE CODE/COURSE NAME	PBM1035 INTENSIVE MATHEMATICS
		COURSEWORK ASSESSMENT	TUTORIAL 1
SESSION			DECEMBER 2018
	DURATION	60 MINS	CLO1 10 MARKS
			CLO2
			CLO3
NAME	Nur Iyazi	TOTAL MARKS	10 MARKS
REGISTRATION NO.	05IPPLBF2018		
PROGRAMME/ SECTION	IPP1		

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

[2 marks]

- (a) Given the expression $x^2 + 5xy - 3$. Identify the total variable term(s) and constant term(s) in this expression.

CLO1, C2

[2 marks]

- (b) Simplify the expression $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$.

Question 2

CLO1, C2

[3 marks]

Simplify the polynomial $3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$.

Question 3

CLO1, C3

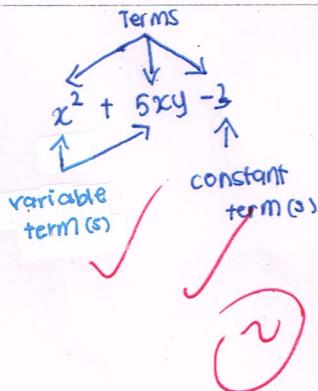
[3 marks]

Use polynomial division to simplify the following.

$$\begin{array}{r} n^2 + 10n + 18 \\ \hline n + 5 \end{array}$$

Q1

(a) $x^2 + 5xy - 3$



(b) $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$

$$\begin{aligned}
 &= 11c^5 - 9c^6 + 15c^5 + 4c - 6c^2 \\
 &= -9c^6 + 11c^5 + 15c^5 - 6c^2 + 4c \\
 &= -9c^6 + 26c^5 - 6c^2 + 4c
 \end{aligned}$$



Q2

(a) $3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$

$$\begin{aligned}
 &= 3x^4 + 3x^3 + 6x^2 - x^4 - 2x^3 + 2x \\
 &= 3x^4 - x^4 + 3x^3 - 2x^3 + 6x^2 + 2x \\
 &= 2x^4 + x^3 + 6x^2 + 2x
 \end{aligned}$$



Q3

$$\frac{n^2 + 10n + 18}{n+5}$$

$$\begin{array}{r} \cancel{n+1} \\ n+5 \sqrt{n^2 + 10n + 18} \\ \cancel{n^2 + 5n} \\ \hline \cancel{5n + 18} \\ \cancel{5n + 10} \\ \hline 8 \end{array}$$

(1)

1. Pentru baza (1) arata ca este rezolvare corecta. $x = 3x^2 + 5x$ este solutie pentru ecuatia $(x^2 - 5x + 3)(x + 5) = 0$.

$$(x^2 - 5x + 3)(x + 5) = x^3 + 5x^2 - 5x^2 - 25x + 3x + 15 = x^3 - 22x + 15 = 0$$

Simplificand

$$(x^2 - 5x + 3)(x + 5) = (x + 3)(x - 1)(x + 5) = 0$$

Solutiile

$$x_1 + x_2 + x_3 = 3x^2 + 5x = 0$$

$$(x^2 - 5x + 3)(x + 5) = (x^2 - 5x + 3)(x + 5)$$

$$x^3 + 5x^2 - 5x^2 - 25x + 3x + 15 =$$

$$x^3 + 3x^2 - 22x + 15 =$$

$$x^3 + 3x^2 + 5x - 27x + 15 =$$

$$x^3 + 3x^2 + 5x + 15 - 27x =$$

$$x^3 + 3x^2 + 5x + 15 - 27x =$$

$$x^3 + 3x^2 + 5x + 15 - 27x =$$

$$(D) AC^3 - DC^3 + EC^3 - (3AC^2 + 3EC^2)$$

$$= 11AC^2 - DC^3 + EC^3 + 4AC^2 - EC^2$$

$$= 11AC^2 + 4EC^2 - 11DC^2 + 4EC^2 + 4AC^2$$

$$= 19AC^2 + 3EC^2 - 11DC^2 + 4AC^2$$

$$= 19AC^2 + 3EC^2 + 4AC^2$$

$$= 23AC^2 + 3EC^2$$

$$x^3 + 3x^2 + 5x + 15 =$$

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JABATAN MATEMATIK, SAINS DAN KOMPUTER		COURSEWORK ASSESSMENT	TUTORIAL 1
NAME	NOREIZLYN BT MOHD KAMIL	SESSION	DECEMBER 2018
REGISTRATION NO.	051PP18F2023	DURATION	60 MIN
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

CL01, C1

[2 marks]

- (a) Given the expression $x^2 + 5xy - 3$. Identify the total variable term(s) and constant term(s) in this expression.

CL01, C2

[2 marks]

- (b) Simplify the expression $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$.

Question 2

CL01, C2

[3 marks]

Simplify the polynomial $3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$.

Question 3

CL01, C3

[3 marks]

Use polynomial division to simplify the following.

$$\begin{array}{r} n^2 + 10n + 18 \\ \hline n + 5 \end{array}$$

Question 1(a)

$x^2 + 5xy - 3$

Term Term Constant term
2 Variable terms

Question 1(b)

$$\begin{aligned}
 & 11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2) \\
 & = 11c^5 - 9c^6 + 15c^5 + 4c - 6c^2 \\
 & = 11c^5 + 15c^5 - 9c^6 - 6c^2 + 4c \\
 & = 26c^5 - 9c^6 - 6c^2 + 4c
 \end{aligned}$$

Question 2

$$\begin{aligned}
 & 3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x) \\
 &= 3x^4 + 3x^3 + 6x^2 - x^4 - 2x^3 + 2x \\
 &= 3x^4 - x^4 + 3x^3 - 2x^3 - 6x^2 + 2x \\
 &= 2x^4 + x^3 - 6x^2 + 2x
 \end{aligned}$$

①

Question 3

$$\begin{aligned}
 & n + 5\sqrt{n^2 + 10n + 18} \\
 &= \frac{n^2 + 5n}{5n + 18} \\
 &= \frac{5n + 10}{8} \\
 &\quad \text{not } P
 \end{aligned}$$

①

$x+5$

(d) Answer

$$(3x^2 + 5x - 2)(x^2 - 3x + 2) = 3x^4 - 13x^3 + 16x^2 + 2x - 4$$

$$= 3x^4 - 3x^3 + 15x^2 - 3x^3 - 12x^2 + 8x - 4$$

$$= 3x^4 - 6x^3 + 3x^2 + 8x - 4$$

$$= 3x^4 - 6x^3 + 3x^2 - 8x - 4$$

(e) Answer

$$x^2 - 3x + 2$$

$$= x^2 - 3x + 2$$

$$= x^2 - 3x + 2$$

$$= x^2 - 3x + 2$$



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JABATAN MATEMATIK, SAINS DAN KOMPUTER

NAME	Muhammad Rusyadi Rifa'i
REGISTRATION NO.	051PP18F2022
PROGRAMME/ SECTION	IPP1

COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
COURSEWORK ASSESSMENT		TUTORIAL 1	
SESSION		DECEMBER 2018	
		CLO1	10 MARKS
DURATION	60 MINS	CLO2	6
		CLO3	
		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

CL01, C1

[2 marks]

- (a) Given the expression $x^2 + 5xy - 3$. Identify the total variable term(s) and constant term(s) in this expression.

CL01, C2

[2 marks]

- (b) Simplify the expression $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$.

Question 2

CL01, C2

[3 marks]

Simplify the polynomial $3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$.

Question 3

CL01, C3

[3 marks]

Use polynomial division to simplify the following.

$$\frac{n^2 + 10n + 18}{n + 5}$$

Question 1

a) $x^2 + 5xy - 3$

- Two variable term and one constant term
- $\cancel{x^2 + 5xy}$ is variable term
- $\cancel{-3}$ is constant term

(1)



b) $11c^5 - 9c^6 + 15c^5 - 2c - 2c + 3c^2$

$$= 11c^5 - 9c^6 + 15c^5 + 4c - 6c^2$$

~~$= 11c^5 + 15c^5 - 9c^6 + 6$~~

$$= -9c^6 + 11c^5 + 15c^5 - 6c^2 + 4c$$

$$= -9c^6 + 26c^5 - 6c^2 + 4c$$

(2)



Question 2

~~$3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$~~

~~$= 3x^4 + 3x^3 + 6x - x^4 - 2x^3 + 2x$~~

~~$= 3x^4 - x^4 + 3x^3 - 2x^3 + 6x + 2x$~~

~~$= 2x^4 + x^3 + 8x$~~

Question 3

$$\frac{n^2 + 10n + 18}{n+5} = n + 5 \dots \text{balance } -7$$

$$\begin{array}{r} n+5 \\ \overline{)n^2 + 10n + 18} \\ \rightarrow n^2 + 5n \\ \hline 5n + 18 \\ - 5n - 25 \\ \hline -7 \end{array}$$

~~$\begin{array}{r} n+5 \\ \overline{)n^2 + 10n + 18} \\ \rightarrow n^2 + 5n \\ \hline 5n + 18 \\ - 5n - 25 \\ \hline -7 \end{array}$~~

$$\begin{array}{r} n+5 \\ \overline{)n^2 + 10n + 18} \\ \rightarrow n^2 + 5n \\ \hline 5n + 18 \\ - 5n - 25 \\ \hline -7 \end{array}$$

(3)

balance

KEMENTERIAN PENDIDIKAN MALAYSIA	POLITEKNIK MALAYSIA	COURSE CODE/COURSE NAME	PBM1035 INTENSIVE MATHEMATICS
JABATAN MATEMATIK, SAINS DAN KOMPUTER		COURSEWORK ASSESSMENT	TUTORIAL 1
NAME	nur shamirra bt Abdullah	SESSION	DECEMBER 2018
REGISTRATION NO.	051PP18F2030	DURATION	60 MINS
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

[2 marks]

- (a) Given the expression $x^2 + 5xy - 3$. Identify the total variable term(s) and constant term(s) in this expression.

CLO1, C2

[2 marks]

- (b) Simplify the expression $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$.

Question 2

CLO1, C2

[3 marks]

Simplify the polynomial $3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$.

Question 3

CLO1, C3

[3 marks]

Use polynomial division to simplify the following.

$$\begin{array}{r} n^2 + 10n + 18 \\ \hline n + 5 \end{array}$$

a) Variable terms - 2
Constant terms - 1

(2)

b) $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$

$$= 11c^5 - 9c^6 + 15c^5 + 4c - 6c^2$$

$$= -9c^6 + 11c^5 + 15c^5 - 6c^2 + 4c$$

$$= -9c^6 + 26c^5 - 6c^2 + 4c$$

(1½)

$$Q2 \quad 3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$$

$$= 3x^4 + 3x^3 + 6x^2 - x^4 - 2x^3 + 2x$$

$$= 3x^4 - x^4 + 3x^3 - 2x^3 + 6x^2 + 2x$$

$$= 2x^4 + 6x^2 + 2x$$

(2)

$$Q3 \quad n+5 \overline{)n^2 + 10n + 18}$$

$n^2 + 10n$

$\underline{-} \quad \quad \quad 18$

15

$\underline{\quad \quad \quad 3}$



KEMENTERIAN
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MALAYSIA

JABATAN MATEMATIK, SAINS DAN KOMPUTER

NAME	Jessica Adwana
REGISTRATION NO.	
PROGRAMME/ SECTION	IPPI

COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
COURSEWORK ASSESSMENT		TUTORIAL 1	
SESSION		DECEMBER 2018	
DURATION	60 MINS	CLO1	10 MARKS
		CLO2	10
		CLO3	10
		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

[2 marks]

- (a) Given the expression $x^2 + 5xy - 3$. Identify the total variable term(s) and constant term(s) in this expression.

CLO1, C2

[2 marks]

- (b) Simplify the expression $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$.

Question 2

CLO1, C2

[3 marks]

Simplify the polynomial $3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$.

Question 3

CLO1, C3

[3 marks]

Use polynomial division to simplify the following.

$$\begin{array}{r} n^2 + 10n + 18 \\ \hline n+5 \end{array}$$

a) $x^2 + 5xy - 3$

How many

(1x)

Variable term Constant term

b) $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$

$$= 11c^5 - 9c^6 + 15c^5 + 4c - 6c^2$$

$$= 11c^5 + 15c^5 - 9c^6 - 6c^2 + 4c$$

$$= -9c^6 + 26c^5 - 6c^2 + 4c$$

(2)

Question 3

$$\begin{aligned}
 & 3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x) \\
 & = 3x^4 + 3x^3 + 6x^2 - x^4 + 2x^3 - 2x \\
 & = 3x^4 - x^4 + 2x^3 + 3x^2 + 6x^2 - 2x \\
 & = 2x^4 + 2x^3 + 9x^2 - 2x
 \end{aligned}$$

Question 3

$$\begin{array}{r}
 n+5+3 \\
 \hline
 n+5 \overline{)n^2+10n+18} \\
 -n^2 - 5n \\
 \hline
 5n+18
 \end{array}$$

(1)

$$\begin{array}{r}
 25n \\
 -25n \\
 \hline
 18
 \end{array}$$

3



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JABATAN MATEMATIK, SAINS DAN KOMPUTER

NAME	AINNUR AIZYATUL
REGISTRATION NO.	05 IPP18F2020
PROGRAMME/ SECTION	IPPI

COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
COURSEWORK ASSESSMENT		TUTORIAL 1	
SESSION		DECEMBER 2018	
	CLO1	10 MARKS	
DURATION	60 MINS		
	CLO2		52
	CLO3		
		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

CL01, C1

- (a) Given the expression $x^2 + 5xy - 3$. Identify the total variable term(s) and constant term(s) in this expression.

[2 marks]

CL01, C2

- (b) Simplify the expression $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$.

[2 marks]

Question 2

CL01, C2

Simplify the polynomial $3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$.

[3 marks]

Question 3

CL01, C3

Use polynomial division to simplify the following.

$$\begin{array}{r} n^2 + 10n + 18 \\ \hline n + 5 \end{array}$$

[3 marks]

Question 1

a) Variable terms

$$= 2$$

constant term

$$= 1$$

$$\begin{aligned} b) & 11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2) \\ & = 11c^5 - 9c^6 + 15c^5 + 4c - 6c^2 \\ & = 11c^5 + 15c^5 - 9c^6 - 4c - 6c^2 \\ & = 9c^6 + 26c^5 - 6c^2 + 4c \end{aligned}$$

Question 2

$$c) 3x^2(x^2 + x + 2)$$

$$\begin{aligned} & = 3x^4 + 3x^3 + 6x^2 - x^4 - 2x^3 - 2x \\ & = 3x^4 - x^4 + 3x^3 - 2x^3 + 6x^2 + 2x \\ & = 2x^4 - x^3 + 6x^2 + 2x \end{aligned}$$

2

Question 3

$$\begin{array}{r} n+2n+3 \\ \hline n+5 \end{array}$$

$$\begin{array}{r} n^2 + 10n + 18 \\ - n^2 - 10n \\ \hline 18 \end{array}$$

$$\begin{array}{r} 18 \\ 15 \\ \hline 3 \end{array}$$

Atikah anak senjon

 KEMENTERIAN PENDIDIKAN MALAYSIA				COURSE CODE/ COURSE NAME	PBM1035 INTENSIVE MATHEMATICS		
JABATAN MATEMATIK, SAINS DAN KOMPUTER				COURSEWORK ASSESSMENT	TUTORIAL 1		
NAME (electing Indica Desmond)				SESSION	DECEMBER 2018		
REGISTRATION NO. 051PP18F2029				DURATION	60 MINS		
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

CL01, C1

[2 marks]

- (a) Given the expression $x^2 + 5xy - 3$. Identify the total variable term(s) and constant term(s) in this expression.

CL01, C2

[2 marks]

- (b) Simplify the expression $11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$.

Question 2

CL01, C2

[3 marks]

Simplify the polynomial $3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$.

Question 3

CL01, C3

[3 marks]

Use polynomial division to simplify the following.

$$\begin{array}{r} n^2 + 10n + 18 \\ \hline n+5 \end{array}$$

$$2) 3x^2(x^2 + x + 2) - (x^4 + 2x^3 - 2x)$$

$$3x^2(x^2 + x + 2) - x(x^3 + 2x^2 - 2)$$

$$-3x^6 - 6x^5 + 3x^4 + 3x^3 + 6x^2 + 6x^2$$

$$-3x^6 - 6x^5 + \cancel{3x^4} + 3x^3 + 12x^2 \quad \times$$

$$(a) \underline{x^2 + 5xy - 3}$$

constant
variable terms

$$3) \frac{n^2 + 10n + 18}{n+5}$$

$$-n^2 \cancel{-5n} \quad \cancel{18}$$

$$5n + 18$$

$$-5n + 18$$

$$(b) 11c^5 - 9c^6 + 15c^5 - 2(-2c + 3c^2)$$

$$= 11c^5 - 9c^6 + 15c^5 - 4c + 6c^2$$

$$- \cancel{4c} + \cancel{6c^2}$$

$$= -9c^6 + 15c^5 + 11c^5 - 6c^2 + 4c$$

$$= -9c^6 + 26c^5 - 6c^2 + 4c$$

$$\text{Ans: } \cancel{-9c^6} + 26c^5 - 6c^2 + 4c$$