
 KEMENTERIA PENDIDIKAN MALAYSIA JABATAN MATEMATIK, SAINS DAN KOMPUTER				COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
				COURSEWORK ASSESSMENT		TEST 1	
				SESSION		DECEMBER 2018	
				DURATION	60 MINS	CLO1	10 MARKS
CLO2							
CLO3							
NAME							
REGISTRATION NO.							
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, C2

Simplify the expressions below:

- (a) $-5g - (3g + 3)$
(b) $2n(-10n + 5) - 7(6 - 10n)$

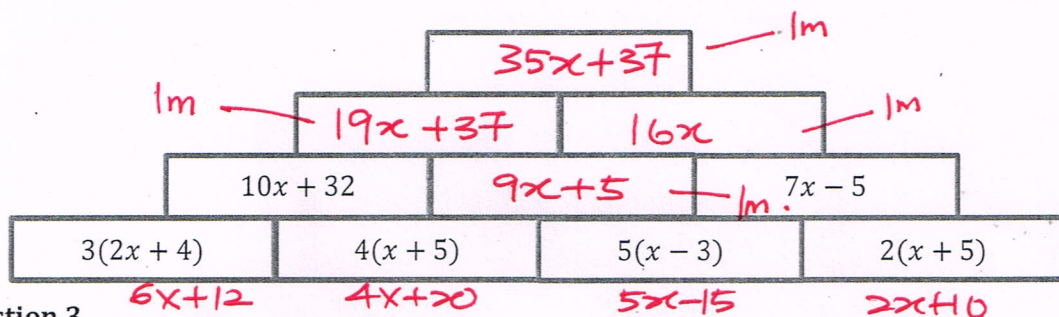
$$\begin{aligned} (a) & -5g - 3g - 3 \quad (1m) \\ & = -8g - 3 \quad (1m) \end{aligned}$$

[4 marks]

Question 2

CLO1, C2

Work out what each of the bricks at the bottom simplify to, then add the two bricks next to each other to give the brick above them.



Question 3

CLO1, C2

Identify the value of y for the following equation given $x = 1$

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

[4 marks]

Question 4

CLO1, C3

You wish to receive an annuity of RM1000 a quarter for 5 years. The quarterly interest rate is 2.5%. What is the present value of the annuity?

$$\begin{aligned} 3(1) - y &= -(1 - 2y) + 5 \quad \leftarrow 1m \\ 3 - y &= -1 + 2y + 5 \quad \leftarrow \frac{1}{2}m \\ 3 - y &= 2y + 4 \quad \leftarrow \frac{1}{2}m \end{aligned}$$

[3 marks]

$$\begin{aligned} P &= \text{RM}1000 \\ R &= 2.5\% \end{aligned}$$

$$\begin{aligned} 3 - 4 &= 3y \quad \leftarrow \frac{1}{2}m \\ 3y &= -1 \quad \leftarrow \frac{1}{2}m \\ y &= -\frac{1}{3} \quad \leftarrow 1m \end{aligned}$$

Question 4

CLO2, C3

[3 marks]

You wish to receive an annuity of RM1000 a quarter for 5 years. The quarterly interest rate is 2.5%. What is the present value of the annuity?

Use the formula $PV = P \times \frac{1-(1+r)^{-n}}{r}$

In this case, $P = 1000$, $n = 5 \times 4 = 20$, $r = 0.025$

Therefore, $PV = 1000 \times \frac{1-(1.025)^{-20}}{0.025}$ (1 mark)

$= 1000 \times \frac{1-0.61027...}{0.025}$ (1 mark)

$= 15589.162 ...$ (1 mark)

So, the present value of the annuity is RM15589.16

POLITEKNIK KUALA LUMPUR

FAKULTAS TEKNIK DAN SAINS

COURSEWORK ASSIGNMENT

TEST 1

SESSION DECEMBER 2018

PRM1035: INTENSIVE MATHEMATICS

Reviewed by:

Endorsed by:

AMALIA LINDA NUR SYAHIR

Lecturer/College Coordinator

Date: / /

Course Leader/Head of

Department/Center/Institution

Date: / /

Signature: /

Signature: /