COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
COURSEWORK ASSESSMENT		TEST 2	
SESSION		DECEMBER 2017	
NAME		DURATION 60 MINS	CLO1 20 MARKS
			CLO2
REGISTRATION NO.			CLO3
PROGRAMME/ SECTION	IPP1	TOTAL MARKS	20 MARKS

KEMENTERIAN PENDIDIKAN TINGGI — POLITEKNIK MALAYSIA — KUCHING SARAWAK

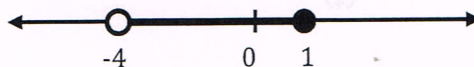JABATAN MATEMATIK, SAINS DAN KOMPUTER

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]

(a) Write each of the following inequalities in interval notation.

(i)

(ii)

[4 marks]

[CLO1, C2]

(b) Illustrate the following inequalities on the number line.

(i) $-\infty < x < 4$

(ii) $x \geq -3$

[4 marks]

[CLO1, C3]

(c) Solve the following inequality.

$$5(x + 3(1 - x) + 2) \geq 5$$

[2 marks]

Question 2
[CLO1, C1-C2]

    (a) Simplify the operations using law of indices.

       (i) $2^{\frac{1}{2}} \times 4^{\frac{3}{2}}$

<div align="right">[CLO1, C1]
[2 marks]</div>

       (ii) $256^{2x-3} \times 16^{1-x}$

<div align="right">[CLO1, C2]
[4 marks]</div>

[CLO1, C1-C3]

    (b) Solve the following equation involving indices.

       (i) $9^x = 27$

<div align="right">[CLO1, C1]
[2 marks]</div>

       (ii) $2^{2n} = 16^{-\frac{3}{4}} \times \left(\frac{1}{4}\right)^{-2}$

<div align="right">[CLO1, C3]
[2 marks]</div>