



**POLITEKNIK KUCHING SARAWAK**  
Department of Mathematics, Science & Computer



<b>Name</b>	:	<b>Registration No.</b>	:
<b>Course Code</b>	: DBM1013	<b>Program / Section</b>	:
<b>Course Name</b>	: Engineering Mathematics 1	<b>Session</b>	:
<b>Assessment</b>	: Tutorial Exercise 3	<b>Topic</b>	: Complex Number
<b>Instruction</b>	: Answer all questions	<b>Date</b>	:

- 1) Given  $u = 3 + 2i$ ,  $v = -1 - 3i$  and  $w = -2 + 5i$ . Find
- a.  $2u - v$  3M
- b.  $vw + u$  3M
- 2) Given  $z_1 = 4 + 3i$  and  $z_2 = 6 + 5i$ , find
- a.  $z_1 \cdot z_2$  4M
- b.  $\frac{z_1}{z_2}$  4M
- 3) Given  $z_1 = 2 + i$  and  $z_2 = -3 + 2i$
- a. Calculate the modulus and argument of  $z_1 z_2$ . 2M
- b. Sketch the Argand diagram for  $z_1 z_2$ . 2M
- c. Find  $z_1 z_2$  in the polar expression. 2M