

**MATH 2167 Mathematics 1**

Associate Degree in Engineering

College of VE, Future Technologies

**Tutorial 3**  
**Complex Numbers**

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**Question 1**Let  $u = 1 - i$  and  $v = -\sqrt{3} + i$ , then find:i.  $u$  and  $v$  in a polar formii.  $2\sqrt{3}u - \sqrt{3}v$ iii.  $\operatorname{Im}\left(\frac{1}{u}\right)$  working in rectangular form

iv.  $\frac{1}{\bar{v}}$  working in a polar form and giving answer in a rectangular form

v.  $\frac{u}{v}$  working in a polar form and giving answer in a rectangular form

vi.  $\frac{u^8}{v^6}$

vii. plot  $u, \bar{u}, v, \bar{v}$  on an Argand diagram