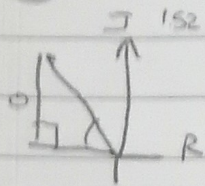


(B) $-0.3 + 1.52j$



$$R = \sqrt{0.3^2 + 1.52^2} (0.09 + 2.3104)$$

$$R = 1.55$$

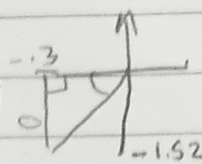
$$\theta = \tan^{-1} \frac{1.52}{0.3} = 78.8^\circ (180 - 78.8)$$

$$\theta = 101.2^\circ$$

$$1.55 (\cos 101.2 + j \sin 101.2)$$

POLAR FORM

$$-0.3 - 1.52j$$



$$R = 1.55$$

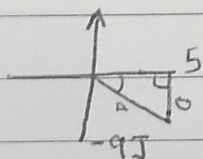
$$\theta = \tan^{-1} \frac{1.52}{0.3} = 78.8 + 180$$

$$\theta = 258.8^\circ$$

$$1.55 (\cos 258.8 + j \sin 258.8)$$

POLAR FORM

(C) $(5 - 9j)^5$



$$\theta = \tan^{-1} \frac{9}{5} = 60.95$$

$$360 - 60.95 = 299.05^\circ$$

$$R = \sqrt{5^2 + 9^2}$$

$$R = 10.3$$

$$10.3^5 (\cos 5(299.05) + j \sin 5(299.05))$$

$$299.05 \times 5 = 1495.25$$

$$115,927 \times 0.57 + 115,927 \times 0.822j$$

$$66,078.4 + 95,292j$$

D) j^7

E) $\bar{g}$ is the conjugate (signs are changed)