

Q3: a ivlent.) ~~2i~~ $a+b+c$

$$\begin{aligned} a &= -2-2i & (-2-2i) + (\sqrt{3}-i) + (0-2i) \\ b &= \sqrt{3}-i & -2 + \sqrt{3} + 0 = -0.26 \\ c &= 0-2i & -2i - i - 2i = -5i \end{aligned}$$

$$\sqrt{3} = 3^{\frac{1}{2}}$$

ANS: $-0.26 - 5i$

Q3: b - polar form

$$\begin{aligned} z &= (4+7i)(3-2i) \\ 12+14 &= 26 \\ -8+21 &= 13i \end{aligned}$$

f	g	i	l
4×3 12	$4 \times -2i$ $-8i$	7×3 21	$7 \times -2i$ $-14i$ $-14i^2 = 14$

$$z = 26 + 13i \quad x=26 \quad y=13i$$

$$\tan^{-1} \frac{13i}{26} = 26.56$$

$$\sqrt{26^2 + 13^2}$$

$$180 - 26.56 = 153.44$$

ANS: $z = 153.44$

Q3: c - Quotient

$$\begin{matrix} a & b \\ 1+3i & 1+i \end{matrix}$$

$$a = 1+3i$$

$$\begin{aligned} &\sqrt{x^2+y^2} \\ &\sqrt{(1^2)+(3i^2)} \\ &1-3 \end{aligned}$$

ANS: $|z| = \sqrt{10} \approx 3.16$

$$b = 1+i$$

$$\sqrt{1^2+i^2}$$

ANS: $|z| = 0$