

2D Multiplying & Dividing in Modulus-Argument Form

1. Express the following calculation in the form $x + iy$:

a)

$$3 \left(\cos \frac{5\pi}{12} + i \sin \frac{5\pi}{12} \right) \times 4 \left(\cos \frac{\pi}{12} + i \sin \frac{\pi}{12} \right)$$

b)

$$2 \left(\cos \frac{\pi}{15} + i \sin \frac{\pi}{15} \right) \times 3 \left(\cos \frac{2\pi}{5} - i \sin \frac{2\pi}{5} \right)$$

c)

$$\frac{\sqrt{2} \left(\cos \frac{\pi}{12} + i \sin \frac{\pi}{12} \right)}{2 \left(\cos \frac{5\pi}{6} + i \sin \frac{5\pi}{6} \right)}$$