

4.5

1) $1 \left(\cos\left(\frac{\pi}{4}\right) + i \sin\left(\frac{\pi}{4}\right) \right) = \frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2} i$

2) $2 \left(\cos(\pi) + i \sin(\pi) \right) = 2(-1 + i \cdot 0) = 2 \cdot (-1) = -2$

3) $\sqrt{2} \left(\cos\left(\frac{\pi}{6}\right) + i \sin\left(\frac{\pi}{6}\right) \right) = \sqrt{2} \left(\frac{\sqrt{3}}{2} + \frac{1}{2} i \right) = \frac{\sqrt{6}}{2} + \frac{\sqrt{2}}{2} i$

4) $\frac{1}{2} \left(\cos\left(\frac{5\pi}{4}\right) + i \sin\left(\frac{5\pi}{4}\right) \right) = \frac{1}{2} \left(-\frac{\sqrt{2}}{2} + i \left(-\frac{\sqrt{2}}{2}\right) \right) = -\frac{\sqrt{2}}{4} - \frac{\sqrt{2}}{4} i$

5) $2 \left(\cos\left(\frac{7\pi}{6}\right) + i \sin\left(\frac{7\pi}{6}\right) \right) = 2 \left(-\frac{\sqrt{3}}{2} + i \left(-\frac{1}{2}\right) \right) = -\sqrt{3} - i$

6) $\sqrt{3} \left(\cos\left(\frac{7\pi}{3}\right) + i \sin\left(\frac{7\pi}{3}\right) \right) = \sqrt{3} \left(\frac{1}{2} + i \frac{\sqrt{3}}{2} \right) = \frac{\sqrt{3}}{2} + \frac{3}{2} i$