

1C De Moivre's Theorem

1. Proof by Induction:

Negatives:

0:

1. Simplify:

$$\frac{\left(\cos\left(\frac{9\pi}{17}\right) + i\sin\left(\frac{9\pi}{17}\right)\right)^5}{\left(\cos\left(\frac{2\pi}{17}\right) - i\sin\left(\frac{2\pi}{17}\right)\right)^3}$$

2. Express $(1 + i\sqrt{3})^7$ in the form $x + iy$, where $x, y \in \mathbb{R}$