

請求出 $z^5 = -32$ 之根， $z = \text{complex variable}$ 。[88 淡江水環 4(a)]

[解] $z^5 = 32e^{i(\pi+2k\pi)}$

$k = 0$ 時， $z = 2e^{i\frac{\pi}{5}}$ $k = 1$ 時， $z = 2e^{i\frac{3\pi}{5}}$ $k = 2$ 時， $z = 2e^{i\pi} = -2$

$k = 3$ 時， $z = 2e^{i\frac{7\pi}{5}}$ $k = 4$ 時， $z = 2e^{i\frac{9\pi}{5}}$



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