

Answer on Question #58288 – Math – Complex Analysis

Question

If $z = 1 + 2i$, then the argument of z is ?

Solution

$$z = 1 + 2i,$$

$$\operatorname{Re} z = 1 > 0; \operatorname{Im} z = 2 > 0,$$

$$\tan(\arg z) = \frac{\operatorname{Im} z}{\operatorname{Re} z} = \frac{2}{1} = 2, \text{ so } \arg z = \arctan(2);$$

$$\arctan(2) \approx 63.43^\circ.$$

Answer: $\arg z = \arctan(2) \approx 63.43^\circ$.