Practice worksheet | Complex Numbers

Cartesian/polar forms

Name: _____ Date: _____

6 questions | 13 marks

1. Convert $1 + i$ to polar form. [2 marks]

2. Convert $-2 - 2i$ to polar form with $-\pi < \theta \leq \pi$. [2 marks]

3. Convert $6\text{cis}(\pi/6)$ to Cartesian form. [2 marks]

4. A signal is represented by $5\text{cis}\,\pi$. State its real and imaginary components. [2 marks]

5. A student writes $-1 + i = \sqrt{2}\,\text{cis}(-\pi/4)$. Explain and correct the error. [3 marks]

6. Why is an argument of $z = 0$ undefined? [2 marks]