Practice worksheet | Complex Numbers

Multiplication as rotation/dilation

Name: _____ Date: _____

6 questions | 14 marks

1. Find the image of $3-2i$ under multiplication by i. [2 marks]

2. Describe the map $w=-3z$. [2 marks]

3. A robot step is represented by $z=2+i$. A turn-and-scale instruction multiplies it by $1+i$. Find the new step. [3 marks]

4. Find the multiplier taking 2 to $-2+2\sqrt{3}i$. [2 marks]

5. Find the inverse of $w=2iz+3$. [3 marks]

6. Two instructions multiply successively by $2i$ and $-\frac{i}{2}$. What is the combined transformation? [2 marks]