Practice worksheet | Complex numbers

Conjugates and division

Name: _____ Date: _____

6 questions | 17 marks

1. Find the conjugate of $-5-2i$. [2 marks]

2. Find $z\overline{z}$ for $z=4-3i$. [2 marks]

3. Simplify $\frac{2-i}{3+i}$. [3 marks]

4. Simplify $\frac{5}{1+2i}$. [3 marks]

5. Solve $(2-i)z = 7+i$. [3 marks]

6. Show that $\frac{z}{\bar{z}}$ has real value only when $ab = 0$, where $z = a + bi \neq 0$ and a, b are real. [4 marks]