Complex arithmetic in both forms

Name: _____ Date: _____

6 questions | 13 marks

1. Calculate $(2-3i)+(1+5i)$. [2 marks]

2. Expand $(2+i)(3-2i)$. [2 marks]

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

4. Calculate $(4\text{cis}(2\pi/3))/(2\text{cis}(-\pi/6))$. [2 marks]

5. Find $2\text{cis}(\pi/3) + 2\text{cis}(-\pi/3)$. [2 marks]

6. If $zw = 6i$ and $z = 1 + i$, find w. [3 marks]