

Imaginary and Complex Numbers
Practice

Simplify:

1) $(4 + 2i) + (-3 - 5i)$

2) $(-3 + 4i) - (5 + 2i)$

3) $(-8 - 7i) - (5 - 4i)$

4) $(3 - 2i)(5 + 4i)$

5) $(3 - 4i)^2$

6) $(3 - 2i)(5 + 4i) - (3 - 4i)^2$

7) Write $\frac{3+7i}{5-3i}$ in standard form

8) Simplify i^{925}

9) Simplify i^{460}

10) Write $\frac{1-4i}{5+2i}$ in standard form

11) $\sqrt{-16}$

12) $\sqrt{-8}$

13) $\sqrt{-6} \sqrt{-6}$

14) $4 + \sqrt{-25}$

15) $\frac{6 - \sqrt{-8}}{-2}$

Answers: (1) $1 - 3i$ (2) $-8 + 2i$ (3) $-13 - 3i$ (4) $23 + 2i$
(5) $-7 - 24i$ (6) $30 + 26i$ (7) $\frac{-3}{17} + \frac{22}{17}i$ (8) i (9) 1
(10) $\frac{-2}{29} - \frac{22}{29}i$ (11) $4i$ (12) $2\sqrt{2}i$ (13) -6 (14) $4 + 5i$
(15) $-3 + \sqrt{2}i$