Name:

Date:

Multiplying and Dividing Complex Numbers

Simplify.

1) $(7 + 3\,i)(7 + 8\,i)$

2) $\frac{4 - 3\,i}{-4\,i}$

3) $(5 + 4\,i)^2$

4) $\frac{2 + 4\,i}{14 + 4\,i}$

5) $2(3\,i) - (5\,i)(-8 + 5\,i)$

6) $(4\,i)(-i)(2 - 5\,i)$

7) $\frac{4 + i}{2 - 5\,i}$

8) $\frac{5}{-10\,i}$

9) $\frac{-2 - 9\,i}{-2 + 7\,i}$

10) $\frac{-3 - 10\,i}{5\,i}$

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1) $(7 + 3\,i)(7 + 8\,i)$

$25 + 77\,i$

2) $\frac{4 - 3\,i}{-4\,i}$

$\frac{3}{4} + i$

3) $(5 + 4\,i)^2$

$9 + 40\,i$

4) $\frac{2 + 4\,i}{14 + 4\,i}$

$\frac{11 + 12\,i}{53}$

5) $2(3\,i) - (5\,i)(-8 + 5\,i)$

$25 + 46\,i$

6) $(4\,i)(-i)(2 - 5\,i)$

$8 - 20\,i$

7) $\frac{4 + i}{2 - 5\,i}$

$\frac{3}{29} + \frac{22\,i}{29}$

8) $\frac{5}{-10\,i}$

$\frac{i}{2}$

9) $\frac{-2 - 9\,i}{-2 + 7\,i}$

$-\frac{59}{53} + \frac{32\,i}{53}$

10) $\frac{-3 - 10\,i}{5\,i}$

$\frac{3\,i - 10}{5}$