

Simplify each. Given Complex answers in Standard Form.

1. $(5 - 2\sqrt{-16}) - 4(6 + 3\sqrt{-49})$

2. $3i(7 - 2i)$

3. $(5 + 7i)^2$

4. $(2 - 4i)(3 - 2i)$

5. $(8 + 3i)(8 - 3i)$

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ANSWERS

1. $(5 - 2\sqrt{-16}) - 4(6 + 3\sqrt{-49})$

2. $3i(7 - 2i)$

$$= (5 - 2 \cdot 4i) - (24 + 12 \cdot 7i)$$

$$= \boxed{-19 - 92i}$$

$$= 21i - 6i^2 = 21i - 6(-1)$$

$$= 21i + 6 = \boxed{6 + 21i}$$

3. $(5 + 7i)^2$

5	5	7i	7i
25	+35i	+35i	+49i ²
			= -49

$$= \boxed{-24 + 70i}$$

4. $(2 - 4i)(3 - 2i)$

2	2	-4i	-4i
6	-12i	-12i	+8i ²
			= -8

$$= \boxed{-2 - 16i}$$

5. $(8 + 3i)(8 - 3i)$

$$= \boxed{73}$$

8	8	+3i	+3i
64	+24i	+24i	-9i ²
			= +9