

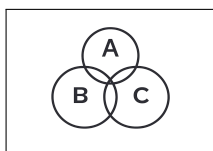
7

Basic Properties and Facts
Complex Numbers

G



$$(3 + 4i)(3 - 4i) = 3^2 - (3 \times 4)i + (3 \times 4)i - 4^2 = 9 + 16 = 25$$



$$(a + bi)(a - bi) = a^2 - abi + abi - b^2i^2 = a^2 + b^2$$



$$(6 + 8i)(6 - 8i) = ?$$

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Basic Properties and Facts
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G



$$(6+8i)(6-8i) = 6^2 - (6 \times 8)i + (6 \times 8)i - 8^2 = 36 + 64 = 100$$