

# Math 305 Homework 1

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12/01/22

**1a.** Expanding:

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

$$= 10 - 3 + 2i + 15i = 7 + 17i.$$

**1b.** Expanding:

$$\left(\frac{1+i}{2+i}\right)^2 = \left(\frac{(1+i)(2-i)}{4+1}\right)^2 = \frac{3}{5}$$