1. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$(5 + 4i)(-3 - 10i)$$

A. $a \in [-57, -52]$ and $b \in [-38.8, -36.1]$

B. $a \in [22, 28]$ and $b \in [-64.3, -59.9]$

C. $a \in [22, 28]$ and $b \in [60.9, 64.4]$

D. $a \in [-21, -14]$ and $b \in [-42.4, -39.1]$

E. $a \in [-57, -52]$ and $b \in [36.8, 38.8]$

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2. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$\frac{72 - 77i}{4 + 5i}$$

A. $a \in [16, 17]$ and $b \in [1, 2.5]$

B. $a \in [17, 19]$ and $b \in [-16, -14.5]$

C. $a \in [-97.5, -96]$ and $b \in [-16.5, -16]$

D. $a \in [-4, -2]$ and $b \in [-16.5, -16]$

E. $a \in [-4, -2]$ and $b \in [-669, -667.5]$

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3. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$\frac{54 - 33i}{-8 - 5i}$$

A. $a \in [-3.05, -2.97]$ and $b \in [533.85, 534.2]$

B. $a \in [-3.05, -2.97]$ and $b \in [5.75, 6.4]$

C. $a \in [-267.09, -266.92]$ and $b \in [5.75, 6.4]$

D. $a \in [-6.72, -6.69]$ and $b \in [-0.45, 0.2]$

E. $a \in [-6.8, -6.72]$ and $b \in [6.25, 7.05]$

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4. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$(-8 - 2i)(-6 - 5i)$$

A. $a \in [35, 40]$ and $b \in [-59, -49]$

B. $a \in [35, 40]$ and $b \in [51, 57]$

C. $a \in [52, 63]$ and $b \in [28, 31]$

D. $a \in [45, 49]$ and $b \in [7, 12]$

E. $a \in [52, 63]$ and $b \in [-28, -24]$
