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

$$\frac{63 - 33i}{8 - i}$$

A. $a \in [537, 537.06]$ and $b \in [-3.5, -1]$

B. $a \in [7.74, 7.89]$ and $b \in [32.5, 34]$

C. $a \in [8.2, 8.52]$ and $b \in [-201.5, -199.5]$

D. $a \in [7.19, 7.49]$ and $b \in [-6, -4]$

E. $a \in [8.2, 8.52]$ and $b \in [-3.5, -1]$

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

$$(-10 - 8i)(4 + 6i)$$

A. $a \in [-41, -39]$ and $b \in [-48, -47]$

B. $a \in [-93, -87]$ and $b \in [-34, -23]$

C. $a \in [-93, -87]$ and $b \in [22, 34]$

D. $a \in [8, 14]$ and $b \in [90, 93]$

E. $a \in [8, 14]$ and $b \in [-98, -82]$

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3. Simplify the expression below and choose the interval the simplification is contained within.

$$13 - 2 \div 1 * 19 - (17 * 14)$$

A. $[-265, -259]$

B. $[-594, -583]$

C. $[247.89, 253.89]$

D. $[-225.11, -224.11]$

E. None of the above

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4. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\sqrt{\frac{0}{625}} + \sqrt{8}i$$

A. Nonreal Complex

B. Pure Imaginary

C. Irrational

D. Rational

E. Not a Complex Number

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5. Choose the **smallest** set of Real numbers that the number below belongs to.

$$-\sqrt{\frac{61009}{361}}$$

A. Irrational

B. Not a Real number

C. Integer

D. Rational

E. Whole
