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

$$\frac{9 + 66i}{3 - 2i}$$

A. $a \in [-4, 7]$ and $b \in [-37, -32]$

B. $a \in [-106, -100]$ and $b \in [16, 23]$

C. $a \in [-9, 0]$ and $b \in [16, 23]$

D. $a \in [-9, 0]$ and $b \in [214, 222]$

E. $a \in [5, 16]$ and $b \in [9, 15]$

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

$$\sqrt{\frac{825}{15}}$$

A. Rational

B. Integer

C. Not a Real number

D. Whole

E. Irrational

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

$$6 - 14^2 + 2 \div 18 * 9 \div 20$$

A. $[-189.99, -189.95]$

B. $[202.04, 202.09]$

C. $[-190.01, -189.97]$

D. $[201.98, 202.01]$

E. None of the above

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

$$(8 + 3i)(7 - 10i)$$

A. $a \in [82, 87]$ and $b \in [-66, -52]$

B. $a \in [24, 30]$ and $b \in [-104, -98]$

C. $a \in [82, 87]$ and $b \in [54, 61]$

D. $a \in [54, 57]$ and $b \in [-31, -29]$

E. $a \in [24, 30]$ and $b \in [93, 103]$

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

$$\sqrt{\frac{64}{0}} + \sqrt{240}i$$

A. Not a Complex Number

B. Pure Imaginary

C. Nonreal Complex

D. Irrational

E. Rational