

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

$$\frac{-9 - 55i}{-4 - 6i}$$

- A. $a \in [6, 14]$ and $b \in [164, 166.4]$
 - B. $a \in [6, 14]$ and $b \in [1.8, 3.6]$
 - C. $a \in [-11, -4]$ and $b \in [4.2, 6.3]$
 - D. $a \in [365, 372]$ and $b \in [1.8, 3.6]$
 - E. $a \in [0, 3]$ and $b \in [8, 11.2]$
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2. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$(8 - 10i)(-7 + 4i)$$

- A. $a \in [-60, -54]$ and $b \in [-40.1, -38.4]$
 - B. $a \in [-99, -92]$ and $b \in [37.5, 39.2]$
 - C. $a \in [-25, -9]$ and $b \in [99.7, 102.2]$
 - D. $a \in [-25, -9]$ and $b \in [-104.1, -101.4]$
 - E. $a \in [-99, -92]$ and $b \in [-39.8, -36.2]$
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3. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\sqrt{\frac{-660}{11}}i + \sqrt{90}i$$

- A. Nonreal Complex
- B. Irrational
- C. Pure Imaginary

- D. Not a Complex Number
 - E. Rational
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4. Simplify the expression below and choose the interval the simplification is contained within.

$$17 - 1^2 + 5 \div 15 * 3 \div 8$$

- A. [17.97, 18.03]
 - B. [15.96, 16.03]
 - C. [16.09, 16.3]
 - D. [18.08, 18.16]
 - E. None of the above
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5. Choose the **smallest** set of Real numbers that the number below belongs to.

$$\sqrt{\frac{720}{12}}$$

- A. Irrational
 - B. Rational
 - C. Whole
 - D. Integer
 - E. Not a Real number
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