

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

$$\frac{-9 - 22i}{4 + 5i}$$

- A. $a \in [-4.97, -3.33]$ and $b \in [-1.36, -0.45]$
 - B. $a \in [-4.97, -3.33]$ and $b \in [-43.22, -42.93]$
 - C. $a \in [-3.01, -1.54]$ and $b \in [-4.8, -4.02]$
 - D. $a \in [-147.54, -145.94]$ and $b \in [-1.36, -0.45]$
 - E. $a \in [1.52, 2.38]$ and $b \in [-3.63, -2.85]$
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2. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\frac{0}{-2\pi} + \sqrt{9}i$$

- A. Nonreal Complex
 - B. Rational
 - C. Pure Imaginary
 - D. Not a Complex Number
 - E. Irrational
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3. Choose the **smallest** set of Real numbers that the number below belongs to.

$$-\sqrt{\frac{935}{11}}$$

- A. Rational
 - B. Whole
 - C. Not a Real number
 - D. Integer
 - E. Irrational
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4. Simplify the expression below and choose the interval the simplification is contained within.

$$18 - 1 \div 4 * 16 - (12 * 9)$$

- A. $[17.4, 21.2]$
 - B. $[-90.3, -89.3]$
 - C. $[124.8, 126.8]$
 - D. $[-95.6, -92.8]$
 - E. None of the above
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5. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$(6 - 5i)(-9 - 8i)$$

- A. $a \in [-15, -11]$ and $b \in [92, 101]$
 - B. $a \in [-15, -11]$ and $b \in [-96, -90]$
 - C. $a \in [-99, -93]$ and $b \in [2, 7]$
 - D. $a \in [-56, -53]$ and $b \in [36, 46]$
 - E. $a \in [-99, -93]$ and $b \in [-5, -1]$
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