

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

$$9 - 1 \div 8 * 14 - (15 * 20)$$

- A. $[-291.5, -290.6]$
 - B. $[-156.9, -152]$
 - C. $[307.8, 311.1]$
 - D. $[-294, -291.8]$
 - E. None of the above
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2. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$(-8 + 7i)(9 + 10i)$$

- A. $a \in [-3, 3]$ and $b \in [138, 144]$
 - B. $a \in [-76, -68]$ and $b \in [68, 71]$
 - C. $a \in [-145, -140]$ and $b \in [-27, -12]$
 - D. $a \in [-3, 3]$ and $b \in [-146, -139]$
 - E. $a \in [-145, -140]$ and $b \in [13, 26]$
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3. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$\frac{18 - 44i}{3 - 5i}$$

- A. $a \in [5.1, 8]$ and $b \in [6, 9]$
 - B. $a \in [7.6, 9.2]$ and $b \in [-45, -35]$
 - C. $a \in [270.9, 277]$ and $b \in [-4, 4]$
 - D. $a \in [7.6, 9.2]$ and $b \in [-4, 4]$
 - E. $a \in [-7.2, -2.7]$ and $b \in [-11, -3]$
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4. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\frac{-17}{4} + \sqrt{-36}i$$

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

$$-\sqrt{\frac{13689}{81}}$$

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