

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

$$8 - 4^2 + 11 \div 3 * 20 \div 5$$

- A. $[29, 42]$
 - B. $[5, 10]$
 - C. $[-11, -5]$
 - D. $[20, 29]$
 - E. None of the above
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2. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\frac{2}{-5} + 100i^2$$

- A. Nonreal Complex
 - B. Not a Complex Number
 - C. Rational
 - D. Irrational
 - E. Pure Imaginary
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3. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$\frac{-9 + 44i}{-5 - 3i}$$

- A. $a \in [4.7, 7.3]$ and $b \in [-7, -5]$
- B. $a \in [-3.3, -1.8]$ and $b \in [-248.8, -245.9]$
- C. $a \in [-3.3, -1.8]$ and $b \in [-7.4, -7.1]$

- D. $a \in [-0.3, 3.4]$ and $b \in [-17.3, -13.5]$
E. $a \in [-87.3, -83.8]$ and $b \in [-7.4, -7.1]$
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4. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$(-4 + 6i)(7 + 5i)$$

- A. $a \in [-30, -25]$ and $b \in [29, 33]$
B. $a \in [-64, -46]$ and $b \in [-25, -18]$
C. $a \in [1, 4]$ and $b \in [57, 63]$
D. $a \in [-64, -46]$ and $b \in [17, 25]$
E. $a \in [1, 4]$ and $b \in [-63, -56]$
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5. Choose the **smallest** set of Real numbers that the number below belongs to.

$$\sqrt{\frac{8}{0}}$$

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