

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

$$\sqrt{\frac{13225}{529}}$$

- A. Not a Real number
 - B. Whole
 - C. Rational
 - D. Irrational
 - E. Integer
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2. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$(-3 + 6i)(-4 + 2i)$$

- A. $a \in [11, 17]$ and $b \in [6, 14]$
 - B. $a \in [-3, 1]$ and $b \in [-34, -25]$
 - C. $a \in [16, 29]$ and $b \in [17, 25]$
 - D. $a \in [-3, 1]$ and $b \in [26, 36]$
 - E. $a \in [16, 29]$ and $b \in [-21, -16]$
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3. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\frac{0}{-17\pi} + \sqrt{8}i$$

- A. Not a Complex Number
- B. Irrational
- C. Pure Imaginary

- D. Nonreal Complex
 - E. Rational
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4. Simplify the expression below and choose the interval the simplification is contained within.

$$5 - 18 \div 20 * 3 - (16 * 11)$$

- A. $[-177.1, -172.6]$
 - B. $[-153.2, -147.2]$
 - C. $[-173, -170]$
 - D. $[178.5, 181.8]$
 - 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.

$$\frac{-36 - 11i}{2 + 6i}$$

- A. $a \in [-21.1, -17]$ and $b \in [-4.2, 1.5]$
 - B. $a \in [-1.3, 0.2]$ and $b \in [-6.9, -4.1]$
 - C. $a \in [-139.3, -136.4]$ and $b \in [4.6, 7.9]$
 - D. $a \in [-4.8, -1.8]$ and $b \in [191.2, 197.3]$
 - E. $a \in [-4.8, -1.8]$ and $b \in [4.6, 7.9]$
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