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

$$-\sqrt{\frac{225}{484}}$$

A. Not a Real number

B. Integer

C. Irrational

D. Rational

E. Whole

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

$$17 - 5 \div 16 * 11 - (4 * 19)$$

A. $[-59.1, -58.9]$

B. $[310.5, 316.6]$

C. $[181.6, 184.8]$

D. $[-64.9, -62.1]$

E. $[92.2, 93.8]$

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3. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\frac{\sqrt{85}}{5} + 7i^2$$

A. Not a Complex Number

B. Pure Imaginary

C. Nonreal Complex

D. Rational

E. Irrational

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

$$(-5 - 2i)(-9 - 10i)$$

$a =$ ☐ $b =$ ☐

A. $a \in [21, 26]$ and $b \in [-76, -67]$

B. $a \in [21, 26]$ and $b \in [61, 71]$

C. $a \in [41, 48]$ and $b \in [17, 22]$

D. $a \in [58, 67]$ and $b \in [-37, -28]$

E. $a \in [58, 67]$ and $b \in [26, 36]$

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

$$\frac{-27 + 66i}{-2 - 1i}$$

$a =$ ☐ $b =$ ☐

A. $a \in [-6, 1]$ and $b \in [-165, -154]$

B. $a \in [-6, 1]$ and $b \in [-34, -30]$

C. $a \in [22, 28]$ and $b \in [-28, -16]$

D. $a \in [-17, -7]$ and $b \in [-34, -30]$

E. $a \in [10, 14]$ and $b \in [-68, -63]$
