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

$$\frac{-27 - 44i}{-5 + 2i}$$

A. $a \in [4, 6.5]$ and $b \in [-23, -21.5]$

B. $a \in [1, 2]$ and $b \in [8.5, 10]$

C. $a \in [6.5, 8.5]$ and $b \in [4, 6.5]$

D. $a \in [1, 2]$ and $b \in [273.5, 275.5]$

E. $a \in [46, 48]$ and $b \in [8.5, 10]$

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

$$(10 + 9i)(-5 + 8i)$$

A. $a \in [-52, -49]$ and $b \in [66, 76]$

B. $a \in [-125, -120]$ and $b \in [34, 39]$

C. $a \in [22, 26]$ and $b \in [122, 130]$

D. $a \in [22, 26]$ and $b \in [-131, -121]$

E. $a \in [-125, -120]$ and $b \in [-36, -33]$

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

$$12 - 2 \div 19 * 15 - (16 * 8)$$

A. $[-116.69, -114.87]$

B. $[-45.23, -43.82]$

C. $[-119.32, -116.81]$

D. $[138.83, 140.78]$

E. None of the above

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4. Choose the **smallest** set of Complex numbers that the number below belongs to.
$$\frac{0}{-9\pi} + \sqrt{9}i$$

   A. Rational

   B. Not a Complex Number

   C. Pure Imaginary

   D. Nonreal Complex

   E. Irrational

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5. Choose the **smallest** set of Real numbers that the number below belongs to.
$$-\sqrt{\frac{-1170}{13}}$$

   A. Whole

   B. Not a Real number

   C. Irrational

   D. Rational

   E. Integer