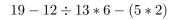
1. Choose the **smallest** set of Real numbers that the number below belongs to.

$$\sqrt{\frac{24}{0}}$$

- A. Not a Real number
- B. Rational
- C. Integer
- D. Irrational
- E. Whole
- 2. Simplify the expression below and choose the interval the simplification is contained within.





- A. [-1, 6]
- B. [36, 44]
- C. [7, 12]
- D. [15, 21]
- E. [23, 36]
- 3. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\frac{23\pi}{0} + 7i^2$$

- A. Irrational
- B. Not a Complex Number
- C. Nonreal Complex
- D. Pure Imaginary
- E. Rational

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

$$(-8+2i)(-4+6i)$$

$$a =$$

$$b =$$

- A.  $a \in [28, 34]$  and  $b \in [10, 15]$
- B.  $a \in [17, 21]$  and  $b \in [54, 60]$
- C.  $a \in [39, 49]$  and  $b \in [38, 42]$
- D.  $a \in [39, 49]$  and  $b \in [-44, -39]$
- E.  $a \in [17, 21]$  and  $b \in [-60, -53]$
- 5. Simplify the expression below into the form a + bi. Then, choose the intervals that a and b belong to.

$$\frac{45 + 22i}{2}$$

$$a =$$

$$b =$$

- A.  $a \in [218, 226]$  and  $b \in [-7, 1]$
- B.  $a \in [-1, 3]$  and  $b \in [7, 15]$
- C.  $a \in [11, 20]$  and  $b \in [3, 9]$
- D.  $a \in [8, 12]$  and  $b \in [-119, -106]$
- E.  $a \in [8, 12]$  and  $b \in [-7, 1]$