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

$$(-6 + 9i)(-10 + 4i)$$

A. $a \in [93, 98]$ and $b \in [-68, -62]$

B. $a \in [55, 62]$ and $b \in [32, 38]$

C. $a \in [23, 29]$ and $b \in [-115, -113]$

D. $a \in [93, 98]$ and $b \in [64, 71]$

E. $a \in [23, 29]$ and $b \in [106, 116]$

---

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

$$\frac{\sqrt{70}}{10} + 2i^2$$

A. Not a Complex Number

B. Irrational

C. Rational

D. Nonreal Complex

E. Pure Imaginary

---

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

$$\sqrt{\frac{180625}{289}}$$

A. Integer

B. Irrational

C. Whole

D. Not a Real number

E. Rational

---

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

$$\frac{-63 + 66i}{8 + 3i}$$

A. $a \in [-308.5, -305.5]$ and $b \in [8.5, 10.5]$

B. $a \in [-12, -8.5]$ and $b \in [2, 6.5]$

C. $a \in [-4.5, -3.5]$ and $b \in [8.5, 10.5]$

D. $a \in [-8, -7.5]$ and $b \in [19, 24.5]$

E. $a \in [-4.5, -3.5]$ and $b \in [716.5, 719]$

---

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

$$4 - 14^2 + 11 \div 3 * 8 \div 9$$

A. $[198.1, 203]$

B. $[-193.5, -190.1]$

C. $[-189.5, -185.8]$

D. $[202.4, 203.4]$

E. None of the above
