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

$$\sqrt{\frac{-2640}{0}} + \sqrt{156}$$

A. Not a Complex Number

B. Pure Imaginary

C. Nonreal Complex

D. Rational

E. Irrational

---

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

$$\frac{36 - 22i}{3 + 8i}$$

A. $a \in [-68.5, -66.5]$ and $b \in [-5.5, -4.5]$

B. $a \in [2.5, 4.5]$ and $b \in [2, 3.5]$

C. $a \in [11, 13]$ and $b \in [-3.5, -2]$

D. $a \in [-1.5, -0.5]$ and $b \in [-5.5, -4.5]$

E. $a \in [-1.5, -0.5]$ and $b \in [-354.5, -353]$

---

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

$$(-5 + 8i)(-10 + 3i)$$

A. $a \in [23, 28]$ and $b \in [95, 97]$

B. $a \in [71, 76]$ and $b \in [-70, -62]$

C. $a \in [47, 52]$ and $b \in [19, 29]$

D. $a \in [71, 76]$ and $b \in [64, 67]$

E. $a \in [23, 28]$ and $b \in [-96, -92]$

---

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

$$\frac{9 - 44i}{-2 - 6i}$$

A. $a \in [-7.5, -6]$ and $b \in [0, 1.5]$

B. $a \in [-5.5, -4]$ and $b \in [7, 8.5]$

C. $a \in [244.5, 246.5]$ and $b \in [1.5, 5.5]$

D. $a \in [5, 7]$ and $b \in [1.5, 5.5]$

E. $a \in [5, 7]$ and $b \in [141, 142.5]$

---

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

$$-\sqrt{\frac{196}{529}}$$

A. Whole

B. Rational

C. Integer

D. Irrational

E. Not a Real number

---

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

$$\sqrt{\frac{1232}{7}}$$

A. Integer

B. Not a Real number

C. Rational

D. Whole

E. Irrational

---

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

$$19 - 15^2 + 11 \div 16 * 14 \div 7$$

A. $[244.3, 246.2]$

B. $[-206.9, -205.9]$

C. $[243.2, 244.4]$

D. $[-205.8, -203.4]$

E. None of the above

---

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

$$\sqrt{\frac{169}{324}} + 25i^2$$

A. Pure Imaginary

B. Not a Complex Number

C. Rational

D. Irrational

E. Nonreal Complex

---

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

$$(4 + 9i)(-3 + 7i)$$

A. $a \in [50, 56]$ and $b \in [54.9, 57.2]$

B. $a \in [-76, -69]$ and $b \in [-0.3, 1.8]$

C. $a \in [-13, -11]$ and $b \in [59.7, 64.9]$

D. $a \in [50, 56]$ and $b \in [-55.5, -52.9]$

E. $a \in [-76, -69]$ and $b \in [-2.2, 0.4]$

---

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

$$19 - 8 \div 10 * 5 - (6 * 12)$$

A. $[88.84, 91.84]$

B. $[-53.16, -48.16]$

C. $[-60, -55]$

D. $[105, 113]$

E. None of the above
