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

$$\frac{-15}{0} + \sqrt{154}i$$

  A. Rational

  B. Pure Imaginary

  C. Irrational

  D. Nonreal Complex

  E. Not a Complex Number

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

$$\frac{-45 - 11i}{6 - 3i}$$

  A. $a \in [-7.55, -7.05]$ and $b \in [2, 4.5]$

  B. $a \in [-237.2, -236.95]$ and $b \in [-5, -3.5]$

  C. $a \in [-6.1, -4.8]$ and $b \in [-202, -200.5]$

  D. $a \in [-6.75, -5.6]$ and $b \in [1, 2]$

  E. $a \in [-6.1, -4.8]$ and $b \in [-5, -3.5]$

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

$$(-3 - 2i)(10 + 4i)$$

  A. $a \in [-25, -19]$ and $b \in [29, 38]$

  B. $a \in [-40, -36]$ and $b \in [-9, -7]$

  C. $a \in [-33, -25]$ and $b \in [-9, -7]$

  D. $a \in [-25, -19]$ and $b \in [-37, -26]$

    E. $a \in [-40, -36]$ and $b \in [7, 16]$

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

$$\frac{-45 + 88i}{6 + 7i}$$

    A. $a \in [-11.5, -9.5]$ and $b \in [1.5, 4]$

    B. $a \in [345, 346.5]$ and $b \in [8.5, 10.5]$

    C. $a \in [3.5, 5.5]$ and $b \in [842.5, 844]$

    D. $a \in [3.5, 5.5]$ and $b \in [8.5, 10.5]$

    E. $a \in [-9, -7]$ and $b \in [11.5, 13]$

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

$$17 - 18 \div 4 * 11 - (14 * 2)$$

    A. $[-60.5, -55.5]$

    B. $[-96, -92]$

    C. $[41.59, 45.59]$

    D. $[-11.41, -7.41]$

    E. None of the above

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

$$\sqrt{\frac{20736}{144}}$$

    A. Integer

    B. Whole

C. Irrational

D. Not a Real number

E. Rational

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

$$\sqrt{\frac{-990}{10}}i + \sqrt{165}i$$

A. Rational

B. Nonreal Complex

C. Irrational

D. Pure Imaginary

E. Not a Complex Number

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

$$(-2 - 4i)(-10 + 8i)$$

A. $a \in [-18, -6]$ and $b \in [53, 60]$

B. $a \in [46, 58]$ and $b \in [-24, -23]$

C. $a \in [-18, -6]$ and $b \in [-59, -53]$

D. $a \in [15, 24]$ and $b \in [-36, -29]$

E. $a \in [46, 58]$ and $b \in [17, 29]$

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

$$-\sqrt{\frac{330625}{625}}$$

A. Whole

B. Rational

C. Not a Real number

D. Irrational

E. Integer

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

$$18 - 14 \div 15 * 19 - (12 * 6)$$

A. $[89.23, 90.02]$

B. $[-72.93, -70.46]$

C. $[-71.48, -69.28]$

D. $[-54.18, -52.78]$

E. None of the above