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

$$14 - 8^2 + 20 \div 4 * 17 \div 18$$

A. $[79, 90]$

B. $[-46, -42]$

C. $[-54, -46]$

D. $[77, 79]$

E. None of the above

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

$$\sqrt{\frac{-630}{7}} + \sqrt{55}$$

A. Not a Complex Number

B. Rational

C. Pure Imaginary

D. Nonreal Complex

E. Irrational

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

$$(-3 - 6i)(-2 + 7i)$$

A. $a \in [44, 55]$ and $b \in [-10, -2]$

B. $a \in [-38, -35]$ and $b \in [27, 34]$

C. $a \in [5, 12]$ and $b \in [-48, -40]$

D. $a \in [-38, -35]$ and $b \in [-35, -29]$

E. $a \in [44, 55]$ and $b \in [2, 14]$

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

$$-\sqrt{\frac{960}{12}}$$

A. Whole

B. Irrational

C. Not a Real number

D. Rational

E. Integer

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

$$\frac{9 - 66i}{-5 + 4i}$$

A. $a \in [-311, -308]$ and $b \in [5.2, 7.2]$

B. $a \in [2, 11]$ and $b \in [7.5, 10.2]$

C. $a \in [-13, -6]$ and $b \in [291.6, 294.3]$

D. $a \in [-13, -6]$ and $b \in [5.2, 7.2]$

E. $a \in [-3, 1]$ and $b \in [-17.4, -14.5]$
