



## Number Types (Complex) - Number to Set Builder Definition - Real, Imaginary, and

### Complex Numbers

1 Select the narrowest set definition that matches this number type

$$\frac{\sqrt{19}}{2}$$

A  $\{a + bi \mid a, b \in \mathbb{R}\}$

B  $\{x \mid x \in \mathbb{R}\}$

C  $\{x \mid x \in \mathbb{Q}\}$

D  $\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}$

2 Select the narrowest set definition that matches this number type

$$2 + \frac{\sqrt{11}i}{5}$$

A  $\{a + bi \mid a, b \in \mathbb{R}\}$

B  $\{bi \mid b \in \mathbb{R}, b \neq 0\}$

C  $\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}$

D  $\{x \mid x \in \mathbb{W}\}$

3 Select the narrowest set definition that matches this number type

$$-1.\overline{5}$$

A  $\{x \mid x \in \mathbb{N}\}$

B  $\{x \mid x \in \mathbb{Q}\}$

C  $\{x \mid x \in \mathbb{W}\}$

D  $\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}$

4 Select the narrowest set definition that matches this number type

$$2 + \frac{\sqrt{43}i}{9}$$

A  $\{a + bi \mid a, b \in \mathbb{R}\}$

B  $\{bi \mid b \in \mathbb{R}, b \neq 0\}$

C  $\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}$

D  $\{x \mid x \in \mathbb{Q}\}$

5 Select the narrowest set definition that matches this number type

$$3 + \sqrt{67}i$$

A  $\{x \mid x \in \mathbb{N}\}$

B  $\{x \mid x \in \mathbb{W}\}$

C  $\{x \mid x \in \mathbb{R}\}$

D  $\{a + bi \mid a, b \in \mathbb{R}\}$

6 Select the narrowest set definition that matches this number type

$$-1.\overline{3}$$

A  $\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}$

B  $\{x \mid x \in \mathbb{Q}\}$

C  $\{x \mid x \in \mathbb{R}\}$

D  $\{x \mid x \in \mathbb{W}\}$

7 Select the narrowest set definition that matches this number type

$$0.\overline{10}$$

A  $\{x \mid x \in \mathbb{N}\}$

B  $\{x \mid x \in \mathbb{Q}\}$

C  $\{a + bi \mid a, b \in \mathbb{R}\}$

D  $\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}$

8 Select the narrowest set definition that matches this number type

$$\frac{0}{9}$$

A  $\{a + bi \mid a, b \in \mathbb{R}\}$

B  $\{x \mid x \in \mathbb{W}\}$

C  $\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}$

D  $\{x \mid x \in \mathbb{R}\}$