



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

### Complex Numbers

1 Select the narrowest set definition that matches this number type

$$\frac{10}{11}$$

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

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

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

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

2 Select the narrowest set definition that matches this number type

$$\sqrt{73}$$

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

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

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

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

3 Select the narrowest set definition that matches this number type

$$\sqrt{17}$$

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

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

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

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

4 Select the narrowest set definition that matches this number type

$$61i$$

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

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

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

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

5 Select the narrowest set definition that matches this number type

$$\frac{3}{6}$$

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

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

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

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

6 Select the narrowest set definition that matches this number type

$$5$$

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

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

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

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

7 Select the narrowest set definition that matches this number type

$$\frac{23i}{3}$$

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

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

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

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

8 Select the narrowest set definition that matches this number type

$$2 + \frac{73i}{8}$$

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

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

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

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