



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

1		Complex Number		Irrational Number	
Select the set that means a complex number				Select the set that means an irrational number	
A	$\{x \mid x \in \mathbb{Q}\}$	B	$\{a + bi \mid a, b \in \mathbb{R}\}$	A	$\{x \mid x \in \mathbb{Q}\}$
C	$\{x \mid x \in \mathbb{N}\}$	D	$\{x \mid x \in \mathbb{R}\}$	C	$\{bi \mid b \in \mathbb{R}, b \neq 0\}$
3		Pure Imaginary Number		4	
		Select the set that means a pure imaginary number		Select the set that means a natural number	
		A	$\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}$	Natural Number	
		B	$\{a + bi \mid a, b \in \mathbb{R}\}$	A	$\{x \mid x \in \mathbb{W}\}$
		C	$\{x \mid x \in \mathbb{Q}\}$	C	$\{x \mid x \in \mathbb{Q}\}$
		D	$\{bi \mid b \in \mathbb{R}, b \neq 0\}$	B	$\{bi \mid b \in \mathbb{R}, b \neq 0\}$
5		Real Number		6	
Select the set that means a real number				Select the set that means a rational number	
		A	$\{x \mid x \in \mathbb{R}\}$	Rational Number	
		B	$\{bi \mid b \in \mathbb{R}, b \neq 0\}$	A	$\{bi \mid b \in \mathbb{R}, b \neq 0\}$
		C	$\{a + bi \mid a, b \in \mathbb{R}\}$	B	$\{x \mid x \in \mathbb{Q}\}$
		D	$\{x \mid x \in \mathbb{N}\}$	C	$\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}$
7		Whole Number		D	
Select the set that means a whole number				$\{x \mid x \in \mathbb{N}\}$	
A	$\{a + bi \mid a, b \in \mathbb{R}\}$	B	$\{x \mid x \in \mathbb{W}\}$		
C	$\{bi \mid b \in \mathbb{R}, b \neq 0\}$	D	$\{x \mid x \in \mathbb{R}\}$		