



Number Types (Real) - Description to Set Builder Definition - Whole, Natural, Integer, Rational, Irrational Numbers

1

Select the set definition that matches this description

A number that cannot be expressed as a simple fraction (e.g., $\sqrt{2}$, π).

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

$\overset{C}{\{x \mid x \in \mathbb{W}\}}$ $\overset{D}{\{x \mid x \in \mathbb{R}\}}$

Any number that can be expressed as a fraction of two integers (e.g., $1/2$, $-3/4$, 5).

Select the set definition that matches this description

$\overset{A}{\{x \mid x \in \mathbb{Q}\}}$ $\overset{B}{\{a + bi \mid a, b \in \mathbb{R}\}}$

$\overset{C}{\{x \mid x \in \mathbb{R}\}}$ $\overset{D}{\{x \mid x \in \mathbb{W}\}}$

3

Select the set definition that matches this description

A positive integer (1, 2, 3, ...).

$\overset{A}{\{x \mid x \in \mathbb{W}\}}$ $\overset{B}{\{a + bi \mid a, b \in \mathbb{R}\}}$

$\overset{C}{\{x \mid x \in \mathbb{N}\}}$ $\overset{D}{\{x \mid x \in \mathbb{R}\}}$

4

Select the set definition that matches this description

A non-negative integer (0, 1, 2, 3, ...).

$\overset{A}{\{x \mid x \in \mathbb{W}\}}$ $\overset{B}{\{a + bi \mid a, b \in \mathbb{R}\}}$

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

5

Select the set definition that matches this description

Any number that can be found on the number line, including both rational and irrational numbers.

$\overset{A}{\{bi \mid b \in \mathbb{R}, b \neq 0\}}$ $\overset{B}{\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}}$

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