



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

1

Select the set definition that matches this description

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

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

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|---|--|
| $\overset{C}{\{bi \mid b \in \mathbb{R}, b \neq 0\}}$ | $\overset{D}{\{x \mid x \in \mathbb{W}\}}$ |
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Select the set definition that matches this description

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

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| $\overset{A}{\{x \mid x \in \mathbb{N}\}}$ | $\overset{B}{\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}}$ |
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| $\overset{C}{\{x \mid x \in \mathbb{R}\}}$ | $\overset{D}{\{a + bi \mid a, b \in \mathbb{R}\}}$ |
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3

Select the set definition that matches this description

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

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| $\overset{A}{\{x \mid x \in \mathbb{Q}\}}$ | $\overset{B}{\{x \mid x \in \mathbb{R}, x \notin \mathbb{Q}\}}$ |
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| $\overset{C}{\{bi \mid b \in \mathbb{R}, b \neq 0\}}$ | $\overset{D}{\{a + bi \mid a, b \in \mathbb{R}\}}$ |
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4

Select the set definition that matches this description

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

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| $\overset{A}{\{x \mid x \in \mathbb{Q}\}}$ | $\overset{B}{\{x \mid x \in \mathbb{N}\}}$ |
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| $\overset{C}{\{x \mid x \in \mathbb{W}\}}$ | $\overset{D}{\{a + bi \mid a, b \in \mathbb{R}\}}$ |
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5

Select the set definition that matches this description

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

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| $\overset{A}{\{bi \mid b \in \mathbb{R}, b \neq 0\}}$ | $\overset{B}{\{x \mid x \in \mathbb{W}\}}$ |
|---|--|

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