



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

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