

Subsets and equal sets

Write \subseteq or $\not\subseteq$ in each blank to form a true statement. Also check if $A = B$

1) $A = \{1, 3, 5, 7\}$

$B = \{1, 3, 5, 7, 9, 11\}$

A _____ B

2) $A = \{x \mid x \text{ is a letter in the word } proof\}$

$B = \{y \mid y \text{ is a letter in the word } roof\}$

A _____ B

3) $A = \{x \mid x \text{ is a planet of Earth's solar system}\}$

$B = \{\text{Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune}\}$

A _____ B

4) $A = \{x \mid x \text{ is a day of the week}\}$

$B = \{\text{Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday}\}$

A _____ B

5) $\{x \mid x \text{ is a man}\}$ _____ $\{x \mid x \text{ is a person}\}$

6) $A = \{x \mid x \in \mathbb{N} \text{ and } 5 < x < 12\}$

$B = \{x \mid x \in \mathbb{N} \text{ and } 2 \leq x \leq 11\}$

A _____ B

7) $\{c, o, n, v, e, r, s, a, t, i, o, n\}$ _____ $\{v, o, i, c, e, s, r, a, n, t, o, n\}$

8) $\{x \mid x \text{ is a cat}\}$ _____ $\{x \mid x \text{ is a black cat}\}$



Answers

- 1) $A \subseteq B$; not equal
- 2) $A \not\subseteq B$; not equal
- 3) $A \subseteq B$; not equal
- 4) $A \subseteq B$; not equal
- 5) \subseteq ; equal
- 6) \subseteq ; not equal
- 7) \subseteq ; equal
- 8) $\not\subseteq$; not equal