



Function Domain/Range Definition - Set Builder to Words (With Union)



1 What range does this inequality describe?

$$\{Y \in \mathbb{R} | Y \leq 6 \text{ or } 8 < Y < 10\}$$

A All real numbers less than or equal to 6 OR greater than or equal to 8 and less than or equal to 10

B All real numbers less than or equal to 6 OR greater than 8 and less than 10

2 What range does this inequality describe?

$$\{Y \in \mathbb{Z} | Y \leq 1 \text{ or } 5 < Y \leq 10\}$$

A All integers less than or equal to 1 OR greater than 5 and less than or equal to 10

B All integers less than 1 OR greater than or equal to 5 and less than or equal to 10

3 What range does this inequality describe?

$$\{Y \in \mathbb{R} | -4 \leq Y \leq -1 \text{ or } 0 < Y < 5\}$$

A All real numbers greater than or equal to -4 and less than or equal to -1 OR greater than 0 and less than 5

B All real numbers greater than -4 and less than -1 OR greater than or equal to 0 and less than 5

4 What domain does this inequality describe?

$$\{X \in \mathbb{R} | X < 7 \text{ or } 8 < X\}$$

A All real numbers greater than -7 and less than 7 OR greater than 8

B All real numbers less than 7 OR greater than 8

5 What range does this inequality describe?

$$\{Y \in \mathbb{Z} | 3 < Y < 6 \text{ or } 10 \leq Y\}$$

A All integers less than 6 OR greater than or equal to 10

B All integers greater than 3 and less than 6 OR greater than or equal to 10

6 What domain does this inequality describe?

$$\{X \in \mathbb{Z} | -5 \leq X < 7 \text{ or } 8 < X < 10\}$$

A All integers greater than or equal to -5 and less than 7 OR greater than 8 and less than 10

B All integers greater than or equal to -5 and less than or equal to 7 OR greater than or equal to 8 and less than 10

7 What domain does this inequality describe?

$$\{X \in \mathbb{R} | X < 7 \text{ or } 9 \leq X < 10\}$$

A All real numbers less than 7 OR greater than or equal to 9 and less than 10

B All real numbers less than 7 OR greater than or equal to 9 and less than or equal to 10

8 What domain does this inequality describe?

$$\{X \in \mathbb{R} | -10 < X < 6 \text{ or } 7 < X < 10\}$$

A All real numbers greater than -10 and less than 6 OR greater than 7 and less than 10

B All real numbers greater than or equal to -10 and less than or equal to 6 OR greater than or equal to 7 and less than 10