



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



1 What set describes the range of this interval?

$$(-8, -1) \cup (-1, \infty)$$

A $\{Y \in \mathbb{R} | -8 < Y < -1 \text{ or } -1 < Y\}$

B $\{Y \in \mathbb{R} | -8 < Y < -1 \text{ or } -1 \leq Y \leq 8\}$

3 What set describes the domain of this interval?

$$[-10, -2] \cup (0, \infty)$$

A $\{X \in \mathbb{R} | -10 \leq X \leq -2 \text{ or } 0 < X\}$

B $\{X \in \mathbb{R} | -10 \leq X < -2 \text{ or } 0 < X \leq 3\}$

5 What set describes the domain of this interval? $[0, 6] \cup (9, 13)$

A $\{X \in \mathbb{R} | 0 \leq X \leq 6 \text{ or } 9 < X < 13\}$

B $\{X \in \mathbb{R} | X < 6 \text{ or } 9 < X < 13\}$

7 What set describes the range of this interval? $[-4, 6) \cup [8, 13)$

A $\{Y \in \mathbb{R} | -4 \leq Y < 6 \text{ or } 8 \leq Y \leq 13\}$

B $\{Y \in \mathbb{R} | -4 \leq Y < 6 \text{ or } 8 \leq Y < 13\}$

2 What set describes the domain of this interval? $(-\infty, 1) \cup (5, \infty)$

A $\{X \in \mathbb{R} | X < 1 \text{ or } 5 < X < 13\}$

B $\{X \in \mathbb{R} | X < 1 \text{ or } 5 < X\}$

4 What set describes the range of this interval? $(1, 5] \cup [8, \infty)$

A $\{Y \in \mathbb{R} | 1 \leq Y \leq 5 \text{ or } 8 \leq Y\}$

B $\{Y \in \mathbb{R} | 1 < Y \leq 5 \text{ or } 8 \leq Y\}$

6 What set describes the domain of this interval? $(-\infty, 8) \cup (9, 12]$

A $\{X \in \mathbb{R} | X < 8 \text{ or } 9 < X \leq 12\}$

B $\{X \in \mathbb{R} | X \leq 8 \text{ or } 9 \leq X\}$

8 What set describes the range of this interval? $(-\infty, 0) \cup (3, 9]$

A $\{Y \in \mathbb{R} | Y \leq 0 \text{ or } 3 < Y\}$

B $\{Y \in \mathbb{R} | Y < 0 \text{ or } 3 < Y \leq 9\}$