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

**1**

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

Which set describes this range?

| A |
|---|
| $\{Y \in \mathbb{Z} \mid -7 \leq Y \leq 7 \text{ or } 8 < Y \leq 10\}$ |

| B |
|---|
| $\{Y \in \mathbb{Z} \mid Y \leq 7 \text{ or } 8 < Y \leq 10\}$ |

**2** Which set describes this domain?

All real numbers less than 7 OR greater than or equal to 8

| A | B |
|---|---|
| $\{X \in \mathbb{R} \mid X < 7 \text{ or } 8 \leq X\}$ | $\{X \in \mathbb{R} \mid -7 < X < 7 \text{ or } 8 < X\}$ |

**3**

All integers greater than 3 and less than 7 OR greater than or equal to 10 and less than or equal to 10

Which set describes this domain?

| A |
|---|
| $\{X \in \mathbb{Z} \mid 3 \leq X \leq 7 \text{ or } -10 < X < 10\}$ |

| B |
|---|
| $\{X \in \mathbb{Z} \mid 3 < X < 7 \text{ or } 10 \leq X \leq 10\}$ |

**4**

All real numbers greater than 4 and less than or equal to 7 OR greater than 8 and less than 10

Which set describes this domain?

| A |
|---|
| $\{X \in \mathbb{R} \mid 4 < X < 7 \text{ or } 8 \leq X \leq 10\}$ |

| B |
|---|
| $\{X \in \mathbb{R} \mid 4 < X \leq 7 \text{ or } 8 < X < 10\}$ |

**5**

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

Which set describes this range?

| A |
|---|
| $\{Y \in \mathbb{Z} \mid -8 < Y < 7 \text{ or } 10 \leq Y\}$ |

| B |
|---|
| $\{Y \in \mathbb{Z} \mid -8 \leq Y \leq 7 \text{ or } -10 \leq Y \leq 10\}$ |

**6**

All integers less than or equal to 1 OR greater than or equal to 2

Which set describes this domain?

| A |
|---|
| $\{X \in \mathbb{Z} \mid X \leq 1 \text{ or } 2 \leq X\}$ |

| B |
|---|
| $\{X \in \mathbb{Z} \mid -1 \leq X \leq 1 \text{ or } -2 \leq X \leq 2\}$ |

**7**

All integers greater than -3 and less than or equal to 7 OR greater than 8 and less than 10

Which set describes this domain?

| A |
|---|
| $\{X \in \mathbb{Z} \mid -3 < X \leq 7 \text{ or } 8 \leq X \leq 10\}$ |

| B |
|---|
| $\{X \in \mathbb{Z} \mid -3 < X \leq 7 \text{ or } 8 < X < 10\}$ |

**8**

All integers greater than or equal to -7 and less than 6 OR greater than 10 and less than 10

Which set describes this range?

| A |
|---|
| $\{Y \in \mathbb{Z} \mid -7 < Y < 6 \text{ or } -10 < Y \leq 10\}$ |

| B |
|---|
| $\{Y \in \mathbb{Z} \mid -7 \leq Y < 6 \text{ or } 10 < Y < 10\}$ |