Problem 1 *Consider the function*

$$f : \{x \in \mathbb{R} : x \leq -1\} \longrightarrow \{x \in \mathbb{R} : \texttt{x > 10}\}$$

What is the domain of the function f?

Multiple Choice:

(a) $\{x \in \mathbb{R} : x \leq -1\}$ ✓

(b) $\{x \in \mathbb{R} : \texttt{x > 10}\}$

(c) $\{x \in \mathbb{R} : \texttt{x > -1}\}$

(d) $\{x \in \mathbb{R} : x \leq 10\}$

Feedback(`attempt`): *Remember that the domain is the "input" of the function, and is the part listed first. So a function $f : A \to B$ would have a domain of "A".*

What is the codomain of the function f?

Multiple Choice:

(a) $\{x \in \mathbb{R} : x \leq -1\}$

(b) $\{x \in \mathbb{R} : \texttt{x > 10}\}$ ✓

(c) $\{x \in \mathbb{R} : \texttt{x > -1}\}$

(d) $\{x \in \mathbb{R} : x \leq 10\}$

Feedback(`attempt`): *Remember that the codomain is the "type of output" of the function, and is the part listed second. So a function $f : A \to B$ would have a codomain of "B".*

Problem 2 *Consider the function*

$$f : \{x \in \mathbb{R} : x \geq 3\} \longrightarrow \{x \in \mathbb{R} : x \leq 6\}$$

What is the domain of the function f?

Multiple Choice:

(a) $\{x \in \mathbb{R} : x \geq 3\}$ ✓

(b) $\{x \in \mathbb{R} : x \leq 6\}$

(c) $\{x \in \mathbb{R} : x < 3\}$

(d) $\{x \in \mathbb{R} : x > 6\}$

Feedback(attempt): *Remember that the domain is the "input" of the function, and is the part listed first. So a function $f : A \to B$ would have a domain of "A".*

What is the codomain of the function f?

Multiple Choice:

(a) $\{x \in \mathbb{R} : x \geq 3\}$

(b) $\{x \in \mathbb{R} : x \leq 6\}$ ✓

(c) $\{x \in \mathbb{R} : x < 3\}$

(d) $\{x \in \mathbb{R} : x > 6\}$

Feedback(attempt): *Remember that the codomain is the "type of output" of the function, and is the part listed second. So a function $f : A \to B$ would have a codomain of "B".*

Problem 3 *Consider the function*

$$f : \{x \in \mathbb{R} : x > -1\} \longrightarrow \{x \in \mathbb{R} : x \leq -7\}$$

What is the domain of the function f?

Multiple Choice:

(a) $\{x \in \mathbb{R} : x > -1\}$ ✓

(b) $\{x \in \mathbb{R} : x \leq -7\}$

(c) $\{x \in \mathbb{R} : x \leq -1\}$

(d) $\{x \in \mathbb{R} : x > -7\}$

Feedback(attempt): *Remember that the domain is the "input" of the function, and is the part listed first. So a function $f : A \to B$ would have a domain of "A".*

What is the codomain of the function f?

Multiple Choice:

(a) $\{x \in \mathbb{R} : x > -1\}$

(b) $\{x \in \mathbb{R} : x \leq -7\}$ ✓

(c) $\{x \in \mathbb{R} : x \leq -1\}$

(d) $\{x \in \mathbb{R} : x > -7\}$

Feedback(attempt): *Remember that the codomain is the "type of output" of the function, and is the part listed second. So a function $f : A \to B$ would have a codomain of "B".*

Problem 4 *Consider the function*

$$f : \{x \in \mathbb{R} : x \geq 4\} \longrightarrow \{x \in \mathbb{R} : x \leq -8\}$$

What is the domain of the function f?

Multiple Choice:

(a) $\{x \in \mathbb{R} : x \geq 4\}$ ✓

(b) $\{x \in \mathbb{R} : x \leq -8\}$

(c) $\{x \in \mathbb{R} : x < 4\}$

(d) $\{x \in \mathbb{R} : x > -8\}$

Feedback(attempt): *Remember that the domain is the "input" of the function, and is the part listed first. So a function $f : A \to B$ would have a domain of "A".*

What is the codomain of the function f?

Multiple Choice:

(a) $\{x \in \mathbb{R} : x \geq 4\}$

(b) $\{x \in \mathbb{R} : x \leq -8\}$ ✓

(c) $\{x \in \mathbb{R} : x < 4\}$

(d) $\{x \in \mathbb{R} : x > -8\}$

Feedback(attempt): *Remember that the codomain is the "type of output" of the function, and is the part listed second. So a function $f : A \to B$ would have a codomain of "B".*
