Home Assignment 3

Discrete Mathematics – CSC/MAT A67, Winter 2024

SETS

Answer the following questions:

1. How do we usually call the set $\{ x \in \mathbb{N} : \exists k \in \mathbb{N}, x = 2k \}$?

This is the set of even numbers.

2. The notation "m | n" means "the integer m divides the integer n without remainder". How do we usually call the set $\mathbb{N} \setminus \{ n \in \mathbb{N} : \exists m \geq 2, m \mid n \}$?

   Correction: The set should be $\mathbb{N} \setminus \{ n \in \mathbb{N} : \exists m \geq 2, m \neq n \wedge m \mid n \}$. The question as stated allows for m = n in the subtracted set, in which case the set $\mathbb{N} \setminus \{ n \in \mathbb{N} : \exists m \geq 2, m \mid n \}$ is just the singleton $\{ 1 \}$.