

Math Homework

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12/23/2025

Problem 1

a)

Proof:

> let $a = 0$ and arbitrary $b \in \mathbb{N}$

>

> $0 \in \mathbb{N}$, so $a \in \mathbb{N}$

>

> By definition of natural numbers, 0 is the smallest natural number. Thus $a = 0$ is the smallest natural number. Thus the statement $a \leq b$ holds true, since arbitrary b can only be ≥ 0

>

> Thus $a \leq b$ when $a = 0$, satisfying the condition ■

b)

$$x^2 - 2x - 8 = 0, (x - 4)(x + 2) = 0, x = 4, -2$$

Roots Of Quadratic Equation: 4, -2