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a. $\neg \forall i \in N \exists x \in Z [x + i > 0]$

$\Updownarrow$

$\exists i \in N \forall x \in Z [x + i \leq 0]$

b. Looks like there is mistake in task

$\neg \exists x \in Z \exists y \in Z [xy < 0]$

$\Updownarrow$

$\forall x \in Z \forall y \in Z [yx \geq 0]$

c. $\neg \forall x \in N \exists y \in N [(x = 3) \wedge (y = 5)]$

$\Updownarrow$

$\exists x \in N \forall y \in N [(x \neq 3) \vee (y \neq 5)]$