Put the following formula in prenex form. Use capital letters when renaming variables. Show details of your work:

$$\forall u\,(u < y) \to \exists y \forall z\left[\neg\,(u + y < w + z) \to \neg\,\exists w\,(w \cdot y < w \cdot z)\right]$$

Answer:

DETAILS

Convert the following argument into a set $\mathcal{C}$ of clauses such that the argument is valid iff the set $\mathcal{C}$ is not satisfiable. Use capital letters when changing the names of variables. Show details of your work.

$$\forall x \Big(\exists y \, (x \cdot y < x) \; \rightarrow \exists z \, \big((y \cdot z < x) \wedge \neg \, (y \cdot x < z) \big) \Big) \quad \therefore \; \exists x \forall y \, (x \cdot y < y)$$

Answer:

DETAILS: