

Group 4

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Introduction to Proof and Problem Solving

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Problem 4a.

$$P_1(f) \equiv \{\forall M \in \mathbb{R}, \exists x \in \mathbb{R} \text{ such that } f(x) > M\}$$

$$P_6(f) \equiv \{\exists (M, K) \in \mathbb{R}^2, \text{ such that } \forall x > K, f(x) > M\}$$

Solution. The negation of p is

$$\neg p \equiv \{\exists n \in \mathbb{Z}, \forall m \in \mathbb{Z} \text{ such that } 4n + 3m \neq 0 \text{ and } 4n + 3m \neq 1\}.$$



Proof. We might do something.



While working on this proof, we received no external assistance aside from advice from Professor Mehmetaj.