

Disproofs ("There Exists")

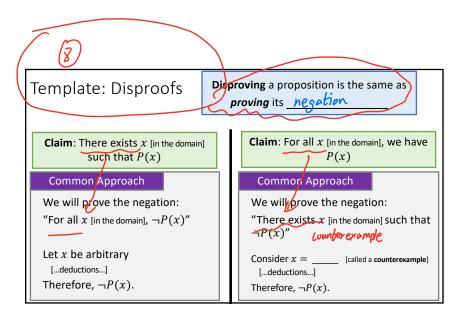
Disprove:

There exists an integer x for which $x > x^2 - 3x + 4$ Disproof:

• We will prove the negation: "For all integer x, we have $x \le x^2 - 3x + 4$ "

• Let x be an arbitrary integer

• We have: $x^2 - 3x + 4 = x^2 - 4x + 4 + x = (x - 2)^2 + x \ge 0 + x = x$



Property of a proof.

1. Consise: not unnecessarily long

2. clear: not ambigitur

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3. complete: no missing intermediate steps

4 logical: every statement logically follows

s rigorous: wer mathematical expressions

6. whyheing: does not raise question