

UCSB: MATH 8
SECTION SIX QUIZ
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Name:

Problem 1

Are the following statements true or false when the universe of discourse is \mathbb{R} ? You must prove your answers are correct to receive credit.

- (a) $\forall x \exists y (x^2 = y)$.
- (b) $\forall x \exists y (x = y^2)$.
- (c) $\exists x \forall y (xy = 0)$.
- (d) $\forall x (x \neq 0 \rightarrow \exists y (xy = 1))$.

Solution