Math 341: Linear Alegbra

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1 Propositional Logic

System of figuring out if something is true or false.

Proposition → Statement → True or False

Examples:

- P: Today is sunny

- P: I'm 5'11

1.1 We can compose them

P: Today is sunny Q: Today is rainy

$P \lor Q \implies$ Today is sunny or Today is cloudy

1.2 Connectors (functions on propositions)

1.2.1 Negation (¬)

P: Today is sunny

$\neg P$: Today is not sunny

Truth Table

p	$\neg q$
T	F
F	T