Boolean algebra

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- consider the following statements that can be either TRUE or FALSE:
  - *Today is Monday AND it is raining*
  - *Today is Monday OR today is NOT Monday*
  - *Today is Monday AND today is NOT Monday*

- Boolean algebra allows us to formalize this sort of reasoning

- Boolean variables may take one of only two possible values: TRUE, FALSE

- there are three fundamental Boolean operators: AND, OR, NOT

- an exhaustive approach to describing when some statement is true (or false): TRUTH TABLES

- the = in Boolean algebra indicates equivalence

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The three fundamental Boolean operators