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Experiment No. : 01

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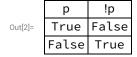
Topic :GENERATE THE TRUTH TABLE FOR MATHEMATICAL LOGIC

Answer for Practice 01

in[1]:= T = BooleanTable[{p, !p}]

Grid[Prepend[T, {"p", "!p"}], Frame → All, Dividers → All]

Out[1]= {{True, False}, {False, True}}



Answer for Practice 02

 $ln[8]:= T = BooleanTable[\{p, q, !p \&\& q\}]$

Out[8]= {{True, True, False}, {True, False, False}, {False, True, True}, {False, False, False}}

 $\label{eq:condition} $$\inf[Prepend[T, \{"p", "q", "!p\&\&q"\}], Frame \to All, Dividers \to All]$$$

| Out[9]= | р | q | !p&&q | |
|---------|-------|-------|-------|--|
| | True | True | False | |
| | True | False | False | |
| | False | True | True | |
| | False | False | False | |

Answer for Practice 03

 $In[13]:= T = BooleanTable[{p, q, p && q || ! q}]$

{{True, True, True}, {True, False, True}, {False, True, False}, {False, False, True}}

 $\label{eq:condition} $$\inf[2]=$ $\operatorname{Grid}[\operatorname{Prepend}[T, \{"p", "q", (p \&\& q) || \,!\, q\}], \ \operatorname{Frame} \to \operatorname{All}, \ \operatorname{Dividers} \to \operatorname{All}]$$

Out[12]=

Out[13]=

| р | q | (p && q) ! q |
|-------|-------|-----------------|
| True | True | True |
| True | False | True |
| False | True | False |
| False | False | True |