1. Complete the truth tables.

	P	Q	$P \lor Q$
	T	T	T
(a)	T	F	T
	F	T	T
i	F	F	F

	P	Q	$P \wedge Q$
	T	T	T
(b)	T	F	F
	F	$\overline{T}$	F
į	F	F	F

	P	Q	$P \Rightarrow Q$
	$\overline{T}$	$\mid T \mid$	$\overline{\tau}$
(c)	T	F	F
	F	T	T
	$\overline{F}$	$\lceil F \rceil$	T

	P	Q	$P \Leftrightarrow Q$
	T	T	T
(d)	T	F	F
İ	F	$\overline{T}$	F
	$\overline{F}$	$\overline{F}$	7

- 2. Without changing its meaning, convert each sentence to a sentence of form "If P, then Q."
  - (a) Whenever a number is divisible by 4, it is even.

    If a number is divisible by 4, then it is even.
  - (b) A function is continuous provided that it is differentiable.

If a function is differentiable, then it is continuous.

Name: Richard QUIZ 5 \$ MATH 211 February 2, 2023

1. Complete the truth tables.

	$\overline{P}$	Q	$P \Rightarrow Q$
	T	T	T
(a)	T	F	F
	F	$\mid T \mid$	T
	F	F	T

	P	Q	$P \lor Q$
	T	T	
(b)	T	F	1
	$\overline{F}$	T	丁
	F	F	F

	P	Q	$P \wedge Q$
	T	T	T
(c)	T	$\overline{F}$	F
i	F	T	F
	$F_{-}$	$\overline{F}$	F

	P	Q	$P \Leftrightarrow Q$
	T	$\lceil T \rceil$	+
(d)	T	F	F
	$\overline{F}$	T	F
	F	F	7

- 2. Without changing its meaning, convert each sentence to a sentence of form "If P, then Q."
  - (a) You use an umbrella only if it is raining.

    If you use an umbrella, then it is raining.
  - (b) Whenever you are lost, consult a map.

If you are lost, then use a map.

1. Complete the truth tables.

	P	Q	$P \Rightarrow Q$
	$\overline{T}$	T	Т
(a)	T	F	F
	$\overline{F}$	T	T
	$\overline{F}$	F	Τ

	P	Q	$P \wedge Q$
	T	T	T
(b)	$\overline{T}$	$\overline{F}$	F
•	F	T	F
	$\overline{F}$	F	F

Γ	બ	$P \lor Q$
T	T	T
T	F	Τ
F	T	T
F	$\overline{F}$	上 上
	T $T$ $F$	$egin{array}{c c} T & Q \\ \hline T & T \\ \hline T & F \\ \hline F & T \\ \hline F & F \\ \hline \end{array}$

	P	Q	$P \Leftrightarrow Q$
	T	T	T
(d)	T	F	F
	$\overline{F}$	T	F
ĺ	$\overline{F}$	F	T

2. Without changing its meaning, convert each sentence to a sentence of form "If P, then Q."

(a) The quadratic formula applies provided that you are solving a quadratic equation.

If you are solving a graduatic equation, then the graduatic formula applies.

(b) Work carefully whenever you take a quiz.

If you take a guiz, then work carefully.

	0.1	Quiz 5 ♡	MATH 211
Name: _	Rimand		February 2, 2023

1. Complete the truth tables.

(a)	P	Q	$P \lor Q$
	T	T	T
	T	F	1
	$\overline{F}$	T	T
	F	F	F

	P	Q	$P \wedge Q$
	T	T	Τ '
(b)	T	F	E
	F	T	F
	F	F	F

	P	Q	$P \Rightarrow Q$
	T	T	<u></u>
(c)	T	$\overline{F}$	Г
	$\overline{F}$	T	1
	F	F	7

	P	Q	$P \Leftrightarrow Q$
	T	T	T
(d)	$\overline{T}$	F	F
	$\overline{F}$	T	F
	$\overline{F}$	F	て

2. Without changing its meaning, convert each sentence to a sentence of form "If P, then Q."

(a) For a number to be even, it is sufficient that it be a multiple of 4.

If a number is a multiple of 4, then it is even.

(b) Whenever the derivative of a function is zero, the function is a constant function.

If the derivative of a function is zero, then the function is a constant function.