

1. (20%) Evaluate the following FOL-wff using the given interpretation:

$$(\forall x)(Q(x) \Rightarrow (\exists y)(P(x, y) \Rightarrow (\forall x)P(y, x)))$$

$$U = \{a, b\}$$

$x$	$y$	$P(x, y)$
$a$	$a$	T
$a$	$b$	T
$b$	$a$	F
$b$	$b$	T

$y$	$Q(y)$
$a$	T
$b$	F