

# Midterm 1 Version 2 Solution

March 19, 2020

## Question 1

a. Since

$S_1 = \{1, 2, 3, 5, 7, 11, 13, 17, 19, 23, 29\}$ , and  $S_2 = \{1, 2, 3, 5, 6, 10, 15, 30\}$ ,

$S_1 \cap S_2 = \{1, 2, 3, 5\}$

b. See the table below

$p$	$q$	$r$	$\neg p$	$\neg p \Leftrightarrow q$	$(\neg p \Leftrightarrow q) \Rightarrow r$
T	T	T	F	F	T
T	T	F	F	F	T
T	F	T	F	T	T
F	T	T	T	T	F
T	F	F	F	T	F
F	F	T	T	F	T
F	F	F	T	F	T

## Question 2

## Question 3

## Question 4