Worksheet 2.1 Negation, Conjunction , Disjunction

1. Tell whether the sentence is true, false or open.   _____

a. Canada is a country in North America.   _____

b. He went to California on vacation.   _____

c. A triangle is a four sided – polygon.   _____

d. A ray has an endpoint and a segment has two endpoints. _____

e. A three – sided polygon is a triangle or is a quadrilateral _____

f. $x + 7 = 10$ _____

g. $4 + 7 > 9$ _____

Write the sentence is symbolic form and then determine whether the statement is true or false.

2. Write the sentence is symbolic form and then determine whether the statement is true or false.

s : There is school on Labor day. h: Labor day is a holiday. w: We work on Labor Day.

	Symbol	Truth value (T or F)
a. We do not work on labor day.	_____	_____
b. Labor day is not a holiday.	_____	_____
c. There is school on Labor Day and Labor day is a holiday.	_____	_____
d. We work on labor day or Labor day is a holiday.	_____	_____
e. Labor day is a holiday and we do not work on Labor day .	_____	_____
f. There is school on Labor day or we work on Labor day.	_____	_____

3. Let p: six is prime q: Six is even. r: Seven is prime

	Symbol	Truth value (T or F)

a. Six is prime and six is even.   _____

_____

b. Six is even and seven is prime   _____

_____

c. It is false that six is prime or even.   _____

_____

d. Six is not prime or seven is prime.   _____

_____

e. Six is not prime and six is even   _____

_____

f. It is not true that six is prime or seven is prime   _____

_____

g. It is not true that seven is prime and six is even.   _____

_____