

Math 112 - Quiz 4

February 21, 2019

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (2 points) Determine whether each sentence is a statement.

(a) Please do not use your cell phone in class.

No

(b) $10 - 3 = 5$

Yes

(c) Steve Jobs is the founder of Microsoft.

Yes

(d) Just do it!

No

2. (1 point) Write the negation of the statement "He is an English major."

He is NOT an English major.

3. (2 points) Identify each statement as a conjunction, disjunction, conditional, or biconditional.

(a) She will get very sick if the bee stings her.

CONDITIONAL

(b) Sara and Brian went hiking in the mountains.

CONJUNCTION

(c) I'm going to pass my math class if and only if I do my homework.

BICONDITIONAL

(d) When your battery dies, you should charge your phone.

CONDITIONAL

TAKE-HOME PORTION OF QUIZ 4. DUE TUESDAY.

4. (2 points) Write the negation of each statement.

(a) Nobody ever survived a fall from Mount Catherine.

SOME ONE SURVIVED A FALL FROM MT. CATHERINE.

(b) Some people watch *Game of Thrones*.

NOBODY WATCHES GAME OF THRONES.

5. (2 points) Let p = "The dog is a poodle" and let q = "The dog bites." Write each statement in words.

(a) $q \rightarrow \sim p$

IF THE DOG BITES, THEN IT IS NOT A POODLE.

(b) $\sim p \wedge p$

THE DOG IS NOT A POODLE AND IT IS A POODLE.

6. (1 point) Refer to the statements p and q from the problem directly above. Write the statement in symbolic form: "The dog bites if it is a poodle."

IF POODLE, THEN BITES.

IF p , THEN q

$p \rightarrow q$