

# Math 2283 - Introduction to Logic

Quiz #2 - 2010.08.27

Solutions

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For this quiz, let  $p$  and  $q$  be sentences. State all pairs of truth values for  $p$  and  $q$  which make each of the following statements *false*.

1.  $p$  and  $q$ .

$p$  true and  $q$  false,  $p$  false and  $q$  true,  $p$  false and  $q$  false

2.  $p$  or  $q$ .

$p$  false and  $q$  false

3. If  $p$ , then  $q$ .

$p$  true and  $q$  false

4.  $p$  iff  $q$ .

$p$  true and  $q$  false,  $p$  false and  $q$  true

5. Not  $p$ .

$p$  true