

# Math 234 Preview Exercises

Sections 2.2 and 2.3

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Read Sections 2.2 and 2.3 in the textbook and answer the following questions. *Hand in this worksheet at the next class.*

1. What is the *biconditional* of statements  $p$  and  $q$ ? How is the biconditional denoted?

2. How is a *necessary* condition different from a *sufficient* condition?

3. What does it mean that an argument is *valid*?

4. Which rules of inference are exhibited by the following argument forms?

$$\begin{array}{l} \text{(a) } p \wedge q \\ \quad \therefore q \end{array}$$

$$\begin{array}{l} \text{(b) } p \rightarrow q \\ \quad q \rightarrow r \\ \quad \therefore p \rightarrow r \end{array}$$

5. What is the *contradiction rule*?