

**CYU 2.1 Conditional Statements**

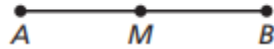
*Use when you get it right all by yourself*  
*S* *Use when you did it all by yourself, but made a silly mistake*  
*H* *Use when you could do it alone with a little help from teacher or peer*  
*G* *Use when you completed the problem in a group*  
*X* *Use when a question was attempted but wrong (get help)*  
*N* *Use when a question was not even attempted*

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Hypothesis & Conclusion	1		
Conditional Statement: “if-then” form	2		9
Negation (~)	3	4	
Converse, Inverse, & Contrapositive	5a	5b	
Truth Value	5a	5b	
Spiral Review	10a	10b	6
Biconditional statements: iff : if and only if		7	8

1. Underline the hypothesis and circle the conclusion in the conditional statement provided. **If a polygon is a pentagon, then it has five sides.**
2. Rewrite the statement into if-then conditional form.  **$9x + 5 = 23$ , because  $x = 2$ .**
3. Write the negation of the statement: **The lake is cold.**
4. Write the negation of the statement: **The dog is *not* a lab.**
5. **Write the conditional statement in if-then form. Then write the converse, inverse, and contrapositive. Then decide the truth value of each statement you write.**
  - a. Let p be “you do your math homework” and q be “you will do well on the test.”

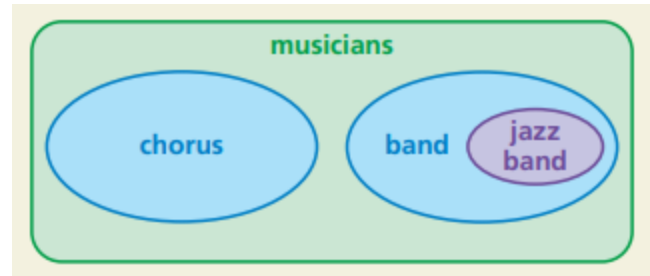
b. Let  $p$  be “you are not an only child” and  $q$  be “you have a sibling.”

6. Decide whether the statement about the diagram is true. Explain your answer using definitions you have learned.  $M$  is the midpoint of  $\overline{AB}$ .



7. Rewrite the conditional & converse statements as a single biconditional statement: **If a polygon has three sides, then it is a triangle. If a polygon is a triangle then it has three sides.**
8. Rewrite the conditional & converse statements as a single biconditional statement: **If an angle is obtuse, then it has a measure between  $90^\circ$  and  $180^\circ$ . If an angle has a measure between  $90^\circ$  and  $180^\circ$ , then it is obtuse.**

9. The Venn diagram represents all the musicians at a high school. Write three conditional statements in if-then form describing the relationships between the various groups of musicians.



10. Find the pattern. Then draw the next two figures in the sequence.

a.



b.



c. 12, 23, 34, 45, ...

**CYU Reflection:** How far can you go: basic, intermediate, or advanced?

**Rate your mastery level!**

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

