

**Chapter Test B**

For use after Chapter 2

Write the inverse, converse, and contrapositive of the conditional statement.

1. If the sky is clear, then we can see the stars at night.

Inverse: \_\_\_\_\_

Converse: \_\_\_\_\_

Contrapositive: \_\_\_\_\_

2. If I ride on the Ferris wheel, then I am not afraid of heights.

Inverse: \_\_\_\_\_

Converse: \_\_\_\_\_

Contrapositive: \_\_\_\_\_

3. If the point is on the line, then it is in the plane.

Inverse: \_\_\_\_\_

Converse: \_\_\_\_\_

Contrapositive: \_\_\_\_\_

4. If we use a calculator, then we are in math class.

Inverse: \_\_\_\_\_

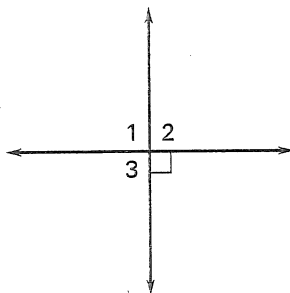
Converse: \_\_\_\_\_

Contrapositive: \_\_\_\_\_

Determine whether the biconditional statement about the diagram is *true* or *false*.

5.  $\angle 1$  and  $\angle 2$  are supplementary if and only if they form a linear pair.

6.  $\angle 3$  and  $\angle 2$  are equal if and only if  $\angle 1$  and  $\angle 3$  are equal.



Using  $p$  and  $q$  below, write the symbolic statement in words.

$p$ : Points  $X$ ,  $Y$ , and  $Z$  are noncollinear.

$q$ : Points  $X$ ,  $Y$ , and  $Z$  are coplanar.

7.  $p \rightarrow q$

8.  $\sim q$

9.  $\sim p$

10.  $q \rightarrow p$

11.  $\sim p \rightarrow \sim q$

12.  $\sim q \rightarrow \sim p$

**Answers**

1. See left.

2. See left.

3. See left.

4. See left.

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_