

LESSON
2.2**Practice A**

For use with the lesson "Analyze Conditional Statements"

Rewrite the conditional statement in if-then form.

1. You have a fever if your body temperature is 103°F .
2. A deer is albino if it has white fur and pink eyes.
3. I'll buy that CD for you if you want it.
4. A pickup truck is a vehicle with a high utility value.

Write the converse, inverse, and contrapositive of the if-then statement.

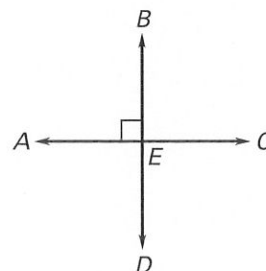
5. If water is frozen, then its temperature is below 0°C .
6. If $x + 3 = 5$, then $x = 2$.

For the given statement, write the if-then form, the converse, the inverse, and the contrapositive and indicate whether each statement is true or false.

7. When it rains, it pours.
8. Any four collinear points are coplanar.

Use the previous statements, the diagram, and the definitions or properties that you have learned to explain why the statement is true.

9. $\overleftrightarrow{AC} \perp \overleftrightarrow{BD}$
10. $\angle AEB$ and $\angle BEC$ are adjacent angles.
11. $\angle AEB$ and $\angle BEC$ are a linear pair.
12. $m\angle AEB + m\angle BEC = 180^{\circ}$
13. $\angle BEC$ is a right angle.



LESSON
2.2**Practice A** *continued**For use with the lesson "Analyze Conditional Statements"*

Rewrite the definition as an if-then statement. Then write the converse of the if-then statement. Finally, write the definition as a biconditional statement.

14. The midpoint of a segment is a point that divides the segment into two congruent segments.
15. Two angles are complementary angles if the sum of their measures is 90° .
16. Adjacent angles are two angles that share a common vertex and side, but have no common interior points.
17. In an equilateral polygon, all sides are congruent.

Decide whether the statement is a valid definition.

18. If a polygon is both equilateral and equiangular, then the polygon is a regular polygon.
19. If a polygon is a square, then the polygon has four congruent sides.
20. If a figure is a line, then the figure has one dimension.
21. **Scuba Diving** The word scuba originated as an acronym for "Self Contained Underwater Breathing Apparatus." Here is a definition of scuba diving.

If a person is scuba diving, then the person is using independent breathing equipment to stay underwater for long periods of time.

Decide whether the converse, the inverse, and the contrapositive of this definition are *true* or *false*.

22. **Skydiving** The statement below describes one of the reasons that overconfidence in a novice skydiver can add danger to a jump.

If a skydiver attempts high speed maneuvers close to the ground, then the jump will have a high risk factor.

Decide whether the converse, the inverse, and the contrapositive of this statement are *true* or *false*. If false, *explain* why.