Name_____ Class_____ Date_____

Practice 2-3

Deductive Reasoning

Use the Law of Detachment to draw a conclusion.

1. If the measures of two angles have a sum of 90°, then the angles are complementary.
   $m\angle A + m\angle B = 90$

2. If the football team wins on Friday night, then practice is canceled for Monday.
   The football team won by 7 points on Friday night.

3. If a triangle has one 90° angle, then the triangle is a right triangle.
   In ΔDEF, $m\angle E = 90$.

Use the Law of Syllogism to draw a conclusion.

4. If you liked the movie, then you saw a good movie.
   If you saw a good movie, then you enjoyed yourself.

5. If two lines are not parallel, then they intersect.
   If two lines intersect, then they intersect at a point.

6. If you vacation at the beach, then you must like the ocean.
   If you like the ocean, then you will like Florida.

If possible, use the Law of Detachment to draw a conclusion. If not possible, write *not possible.*

7. If Robbie wants to save money to buy a car, he must get a part-time job. Robbie started a new job yesterday at a grocery store.

8. If a person lives in Omaha, then he or she lives in Nebraska.
   Tamika lives in Omaha.

9. If two figures are congruent, their areas are equal.
   The area of *ABCD* equals the area *of PQRS.*

Use the Law of Detachment and the Law of Syllogism to draw conclusions from the following statements.

10. If it is raining, the temperature is greater than 32°F.
    If the temperature is greater than 32°F, then it is not freezing outside.
    It is raining.

11. If you live in Providence, then you live in Rhode Island.
    If you live in Rhode Island, then you live in the smallest state in the United States.
    Shannon lives in Providence.

12. If it does not rain, the track team will have practice.
    If the track team has practice, the team members will warm up by jogging two miles.
    It does not rain on Thursday.

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