1. Suppose this statement is true:
All cousins are related.

Which of the following statements must be true?

(a) If two people are cousins, then they are related.
(b) If two people are cousins, then they are not related.
(c) If two people are not cousins, then they are related.
(d) If two people are not cousins, then they are not related.

(e) If two people are related, then they are cousins.
(f) If two people are related, then they are not cousins.
(g) If two people are not related, then they are cousins.
(h) If two people are not related, then they are not cousins.

2. Suppose this statement is true:
Every square is a rectangle.

Which of the following statements must be true?

(a) If a shape is a square, then the shape is a rectangle.
(b) If a shape is a square, then the shape is not a rectangle.
(c) If a shape is not a square, then the shape is a rectangle.
(d) If a shape is not a square, then the shape is not a rectangle.

(e) If a shape is a rectangle, then the shape is a square.
(f) If a shape is a rectangle, then the shape is not a square.
(g) If a shape is not a rectangle, then the shape is a square.
(h) If a shape is not a rectangle, then the shape is not a square.

3. Suppose this statement is true:
Anyone who wears glasses is shy.

Which of the following statements must be true?

(a) If someone wears glasses, then that person is shy.
(b) If someone does not wear glasses, then that person is not shy.
(c) If someone is shy, then that person wears glasses.
(d) If someone is not shy, then that person does not wear glasses.

For #4-#7, write two different “IF-THEN” statements that are equivalent to each statement.

4. "All blondes are fun."
5. "Any food that contains sugar tastes sweet."
6. "All herbs are made from leaves."
7. "Every rectangle has a right angle."

For #8-#10, write an “IF-THEN” statement that is equivalent to each statement.

8. "If you drive a bus, then you have a special license."
9. "If you are attracted to a person, then you love that person."
10. "If a number is greater than 100, then it is a positive number."