



Practice Masters Level A

12.3 A Closer Look at If-Then Statements

For each conditional in Exercises 1-3, explain why it is true or false. Then write the converse, inverse, and contrapositive, and explain why each is true or false.

1. Conditional: If two angles are vertical angles, then the two angles are congruent. _____

Converse: _____

Inverse: _____

Contrapositive: _____

2. Conditional: For numbers a , b , and c , if $a + c < b + c$, then $a < b$. _____

Converse: _____

Inverse: _____

Contrapositive: _____

3. Conditional: If $1 + 1 = 2$, then elephants can fly. _____

Converse: _____

Inverse: _____

Contrapositive: _____

For Exercises 4–6, write each statement in if-then form.

4. When the car runs out of gas, it will stop. _____

5. All puppies are cute. _____

6. We'll go to the park if the weather is nice. _____



Practice Masters Level C

12.3 A Closer Look at If-Then Statements

For each conditional in Exercises 1–3, explain why it is true or false. Then write the converse, inverse, and contrapositive, and explain why each is true or false.

1. Conditional: If two angles are complementary angles, then they are both acute. _____

Converse: _____

Inverse: _____

Contrapositive: _____

2. Conditional: If $AX = XB$, then X is the midpoint of segment AB . _____

Converse: _____

Inverse: _____

Contrapositive: _____

3. Conditional: If a tail is a leg, then horses have 5 legs. _____

Converse: _____

Inverse: _____

Contrapositive: _____

For Exercises 4–6, write each statement in if-then form.

4. All desserts are sweet. _____

5. We'll play baseball if it doesn't rain. _____

6. Numbers divisible by five end in either 5 or 0. _____