

Conditional Sentences and Logical Reasoning 2

Geometry

Identify the hypothesis and conclusion in each conditional sentence, then write the converse.

- 1) If you eat lasagna, then you are Italian..
- 2) If you stay up late, then you might see a falling star.
- 3) If they win the game, then they will get a trophy..
- 4) If the gardener waters the flowers, then they will grow.
- 5) The group can go to the museum, if they get a car.
- 6) .He will fall, if he isn't careful.
- 7) If he asks her out on a date, she will graciously accept the offer.
- 8) If you stand in front of the group, you had better know your stuff.
- 9) If $4x - 7 = 25$, then $x = 8$
- 10) $t = 3$, if $9t + 1 = 28$

Write the following sentences in conditional form.

- 11) Kids who go to school have lots of fun.
- 12) Astronauts fly in space ships.
- 13) Americans stand during the National Anthem.
- 14) Children enjoy reading nursery rhymes.

Determine whether each statement and it's converse are true or false.

- 15) If you get you get your family portrait, then your mom will expect you to comb your hair.
- 16) If you travel one mile in one minute, then you are going sixty miles per hour.
- 17) If a person is fat, then they are also short.
- 18) If the animal eats bananas, then it is a chimpanzee.

Give a counterexample for each conclusion.

- | | |
|---|---|
| 19) All angles are acute. | 23) Girls have blond hair. |
| 220) All trees have leaves. | 24) Every month has 30 or 31 days. |
| 21) All quadrilaterals are squares. | 25) All trucks have four wheels. |
| 22) Everybody loves the Los Angeles Lakers. | 26) Every conclusion has a counterexample |

Use the following assumptions to reach a conclusion.

- | | |
|---|--|
| 27) i) Teachers love to write on the whiteboard.
ii) Mr. Herring is a teacher. | 30) i) Leopards have spots..
ii) That animal is a leopard. |
| 28) i) I am late to school whenever I have to
scrape the frost off of my windshield.
ii) There is frost on my windshield this
morning. | 31) i) John is faster than Tim.
ii) Tim runs a five minute mile. |
| 29) i) We stand for the national anthem on
Mondays.

ii) It is Tuesday. | 32) i) Cindy earned \$75.
ii) Pam earned twice as much money as
Cindy. |
| 33) i) Brad earned 15 more points on his test than Sam.
ii) Sam earned $\frac{3}{4}$ of the points that Paul earned.
iii) Paul earned twice as many points as Jim.
iv) Jim earned 40 points on the test. | |
| 34) i) Lynette is taller than Amanda.
ii) Amanda is four inches taller than Jennifer.
iii) Jennifer is 5'2". | |
| 35) i) My mom makes fudge for Christmas.
ii) When my mom makes fudge, I eat fudge.
iii) When I eat fudge I gain weight.
iv) When I gain weight my clothes don't fit.
v) It is Christmas. | |