Write the following sentences in conditional form.

1) People from Ireland have red hair and green eyes.

2) Rich people live in Beverly Hills.

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

If the parallelogram has four right angles, then it is a rectangle.

3) Converse -

4) Inverse -

5) Contrapositive -

6) Biconditional

If those angles are vertical angles, then they are congruent.

7) Converse -

8) Inverse -

9) Contrapositive -

10) Biconditional

The quadrilateral is a trapezoid, if it has one pair of parallel sides.

11) Converse -

12) Inverse -

13) Contrapositive -

14) Biconditional

If the angles add to 180°, then they are supplementary.

15) Converse -

16) Inverse -

17) Contrapositive -

18) Biconditional

k = -5, if 5k + 1 = 24

19) Converse -

20) Inverse -

21) Contrapositive -

22) Biconditional

Write the converse for each sentence below. Determine whether the statement <u>and</u> it's converse are true or false

23) If a man is tall, then he is good at basketball.

24) If a person is Scottish, then he/she plays the bagpipes.

Give a counterexample for each conclusion.
25) Everybody loves the Lord of the Rings trilogy.   26)   All polygons have 5 sides.

27)   All reptiles have four legs.

28) All girls wear earrings.

Use the following assumptions to reach a conclusion.

29)   i) Girls wear high heels.
        ii) Sarah is a girl.

30)   i) Kara goes to church on Sunday.
        ii) Kara is at church,

31)   i) Kevin takes asprin when he has a headache.
        ii) Kevin is taking asprin.

32)   i)   When it rains, it is cold.
        ii)   When it is cold, my mom makes hot chocolate.
        iii) I love to drink hot chocolate.
        iv) It is raining.