



Jeanette Rankin was one of nine women among 435 members of Congress at the start of World War II.

37. **Multiple Choice** Which conditional and its converse are both true?

- Ⓐ If $x = 1$, then $2x = 2$. Ⓒ If $x = 2$, then $x^2 = 4$.
 Ⓑ If $x = 3$, then $x^2 = 6$. Ⓓ If $x^2 = 4$, then $x = 2$.

Write each statement as a conditional.

38. "We're half the people; we should be half the Congress."— Jeanette Rankin, former U.S. Congresswoman, calling for more women in office
 39. "A great work is made out of a combination of obedience and liberty."
 — Nadia Boulanger, orchestra conductor and musical mentor
 40. "A problem well stated is a problem half solved."
 — Charles F. Kettering, inventor

Algebra Write the converse of each statement. If the converse is true, write *true*; if not true, provide a counterexample.

41. If $x - 3 = 15$, then $x = 18$. 42. If y is negative, then $-y$ is positive.
 43. If $x = -6$, then $|x| = 6$. 44. If $x < 0$, then $x^2 > 0$.
 45. If $x = 2$, then $x^2 = 4$. 46. If $x < 0$, then $x^3 < 0$.

47. **Advertising** Al sees an ad that states, "You want to look good at the beach this summer. Join GoodFit Health Club." Al figures, "I am going to join GoodFit Health Club, so that I will look good at the beach."

- a. Write the statement in the ad as a conditional.
 b. Write Al's statement as a conditional.
 c. **Writing** Explain why the statement in the ad does not have the same meaning as Al's statement.

Reading Math Let statements p , q , and r be as follows.

p : A figure is square.

q : A figure has four congruent angles.

r : A figure has four congruent sides.

Write the words for the symbolic statement shown. Determine the truth value of the statement. If it is false, provide a counterexample.

48. $p \rightarrow q$ 49. $q \rightarrow p$ 50. $r \rightarrow q$ 51. $(q \text{ and } r) \rightarrow p$

Advertising Advertisements often suggest conditional statements. For example, an ad might imply that if you buy a product, you will be popular.

52. What conditional is implied in the ad at the right?

53. **Open-Ended** Find an ad in which a conditional is used or implied.

Write each postulate as a conditional statement.

54. Two intersecting lines meet in exactly one point.
 55. Two intersecting planes meet in exactly one line.
 56. Two congruent figures have equal areas.
 57. Through any two points there is exactly one line.
 58. Through any three noncollinear points there is exactly one plane.



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Lesson 2-1 Conditional Statements **85**

Challenge

Write a statement beginning with *All*, *Some*, or *No* to match each Venn diagram.

