

Homework: pages 129-131: 1-5, 7, 8-21, 31

Choose the correct vocabulary term to complete each sentence.

1. The part of a conditional that follows "then" is the ?.
2. Reasoning logically from given statements to a conclusion is ?.
3. A conditional has a(n) ? of true or false.
4. The ? of a conditional switches the hypothesis and conclusion.
5. When a conditional and its converse are true, you can write them as a single true statement called a(n) ?.
7. The part of a conditional that follows "if" is the ?.

Find a pattern for each sequence. Describe the pattern and use it to show the next two terms.

8. 1000, 100, 10, ...
9. 5, -5, 5, -5, ...
10. 34, 27, 20, 13, ...
11. 6, 24, 96, 384, ...

Find a counterexample to show that each conjecture is false.

12. The product of any integer and 2 is greater than 2.
13. The city of Portland is in Oregon.

Rewrite each sentence as a conditional statement.

14. All motorcyclists wear helmets.
15. Two nonparallel lines intersect in one point.
16. Angles that form a linear pair are supplementary.
17. School is closed on certain holidays.

Write the converse, inverse, and contrapositive of the given conditional. Then determine the truth value of each statement.

18. If an angle is obtuse, then its measure is greater than 90 and less than 180.
19. If a figure is a square, then it has four sides.
20. If you play the tuba, then you play an instrument.
21. If you baby-sit, then you are busy on Saturday night.

31. **Algebra** Fill in the reason that justifies each step.

Given: $QS = 42$

Prove: $x = 13$



Statements	Reasons
1) $QS = 42$	1) a. <u>?</u>
2) $QR + RS = QS$	2) b. <u>?</u> Segment Addition Postulate
3) $(x + 3) + 2x = 42$	3) c. <u>?</u>
4) $3x + 3 = 42$	4) d. <u>?</u>
5) $3x = 39$	5) e. <u>?</u>
6) $x = 13$	6) f. <u>?</u>