Name_____ Date _____

Write the if-then form of the conditional statement.

Answers

1. It is time for dinner if it is 6 P.M.

1. _____

2. The measure of a right angle is 90°.

_____

Write the converse of the conditional statement. If the converse is false, provide a counterexample.

2. _____

3. If two angles are not adjacent, then they are vertical angles.

_____

3. _____

4. If x is odd, then $3x$ is odd.

_____

**Write the inverse of the conditional statement.**

4. _____

5. If an angle measures 30°, then it is acute.

_____

6. If two angles are supplementary, then their sum is 180°.

5. _____

Write the contrapositive of the conditional statement.

_____

7. If an animal is a panther, then it lives in the forest.

_____

6. _____

8. If two angles have the same measure, then they are congruent.

_____

Use the diagram to determine whether the statement is true or false.

7. _____

9. Points A, $B,$ and L are coplanar.

_____

10. $\overleftrightarrow{JL}$ lies on plane K.

_____

8. _____

11. $\overleftrightarrow{DF}$ intersects $\overleftrightarrow{AC}$.

_____

12. Points D, F, and E are collinear.

9. _____

10. _____

11. _____
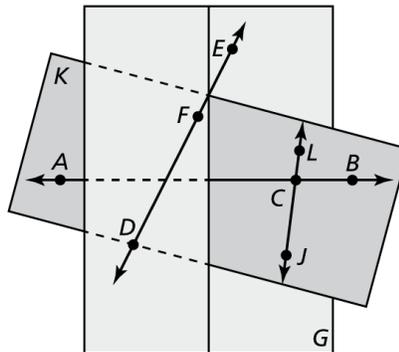
Solve the equation. Justify each step.

13. $-8x + 7 = -33$

12. _____

13. _____

See left.

14. $9x - 5 = 3x + 5$

14. _____

See left.

15. $2(4x - 3) - 8 = 4 + 2x$

15. _____

See left.

Chapter 2 **Test B** (continued)

16. A gardener has 26 feet of fencing for a garden. To find the width of the rectangular garden, the gardener uses the formula $P = 2l + 2w$, where P is the perimeter, l is the length, and w is the width of the rectangle. The gardener wants to fence a garden that is 8 feet long and plans on using all of the available fencing. How wide is the garden? Solve the equation for w, and justify each step.

17. Use the diagram to find the value of x and the measure of each angle. Write a justification for each step.
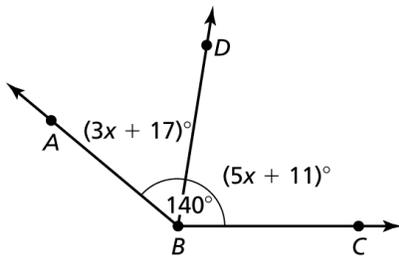
Answers

16. _____

     See left.

17. _____

     See left.

18. _____

19. _____

20. _____

21. _____

22. _____

23. _____

24. _____

25. **See left.**

Decide whether inductive reasoning or deductive reasoning is used to reach the conclusion.

18. Because today is Friday, tomorrow will be Saturday.

19. Sandy earned A's on her first six geometry tests, so she concludes that she will always earn A's on geometry tests.

20. If $5x = 25$, then $x = 5$.

Identify the property that justifies each statement.

21. If $m\angle ABC = m\angle DEF$, then $m\angle DEF = m\angle ABC$.

22. If $AB = CD$ and $CD = EF$, then $AB = EF$.

23. $x = y$; If $y = 9$, then $x = 9$.

24. $W = W$

Write a proof using any format.

25. Given $m\angle 1 + m\angle 2 = 90°$,
$m\angle 3 + m\angle 4 = 90°$

    Prove $m\angle 1 = m\angle 4$