

Chapter 2 Review Problems

Name Key per _____

MULTIPLE CHOICE. Choose the property that justifies the statement.

1. If $8PQ = AM$, then $PQ = \frac{1}{8}AM$

- A.) Addition B.) Subtraction C.) Division D.) Substitution

2. If A is the midpoint of CT, then $CA = AT$

- A.) Reflexive Property B.) Definition of Midpoint C.) Transitive D.) Definition of Congruent Segments



3. If p is true and r is true, then $p \rightarrow r$ is a true conditional statement.

- A.) Law of Detachment B.) Law of Syllogism C.) Substitution D.) None of these

4. If $p \rightarrow q$ and $q \rightarrow r$ are true conditional statements then $p \rightarrow r$ is true.

- A.) Law of Detachment B.) Law of Syllogism C.) Substitution D.) None of these

5. If $\angle A$ and $\angle B$ form a linear pair and $\angle A = 85^\circ$ then $\angle B = \underline{95^\circ}$

6. If $\angle A$ and $\angle B$ form a linear pair and $\angle A = 32^\circ$ then $\angle B = \underline{148^\circ}$

7. If $\angle A$ and $\angle B$ are complimentary and $\angle A = 32^\circ$ then $\angle B = \underline{58^\circ}$

8. If $\angle A$ and $\angle B$ are complimentary and $\angle A = 85^\circ$ then $\angle B = \underline{15^\circ}$

9. If $\angle A$ and $\angle B$ are supplementary and $\angle A = 85^\circ$ then $\angle B = \underline{95^\circ}$

10. If $\angle A$ and $\angle B$ are supplementary and $\angle A = 32^\circ$ then $\angle B = \underline{148^\circ}$

11. If $\angle A$ and $\angle B$ are vertical angles and $\angle A = 85^\circ$ then $\angle B = \underline{85^\circ}$

12. If $\angle A$ and $\angle B$ are vertical angles and $\angle A = 32^\circ$ then $\angle B = \underline{32^\circ}$

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13. Find the distance and midpoint between points (3, -8) and (4, 5).

$$\sqrt{1^2 + 13^2}$$

Distance = $\sqrt{170}$

$$\left(\frac{3+4}{2}, \frac{-8+5}{2}\right)$$

Midpoint = $\left(\frac{7}{2}, \frac{-3}{2}\right)$

14. Write the Converse of the statement. Determine if the converse statement is true or false? If false, provide a counterexample. (If true, you don't have to provide counter example)

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

Converse: If the angles are congruent, then they are vertical angles

TRUE or FALSE Counter example: $\sphericalangle^{90^\circ}$ $\sphericalangle^{90^\circ}$, \cong but not vertical

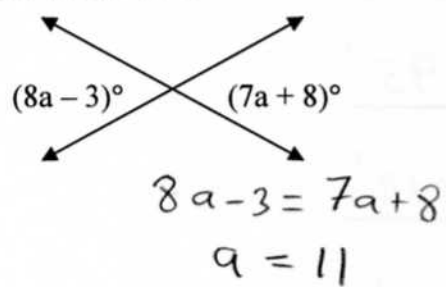
15. Write the Converse of the statement. Determine if the converse statement is true or false? If false, provide a counterexample.

If the angles are supplementary, then the angles sum is 180° .

Converse: If the sum of the angles is 180° , then the angles are supplementary

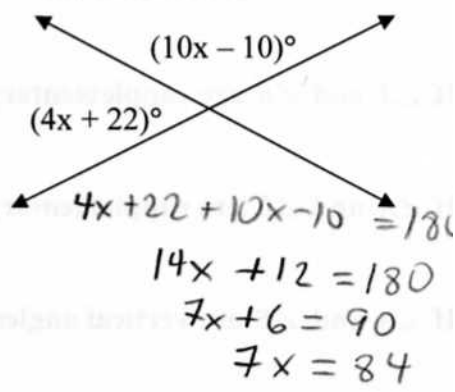
TRUE or FALSE Counter example: _____

16. Solve for a



a = 11

17. Solve for x



x = 12