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| **Unit 2 Test Part 1 Study Guide** | **Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ S \_\_\_\_\_** | |
| 1. Which theorems or rule are used to prove that two triangles are congruent? | | |
| 2. Consider the triangles shown. Which rule, if any, can used to prove triangle congruency? | | |
| 3. If and in the diagram below, find . | | |
| 4. In the diagram below ,, and . Find x and the measure of each angle. | | |
| **5.** Find if and . | | **6.** Find m<1 if m<2 = 5x and m<3 = 6x – 7. |

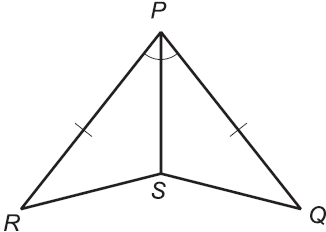
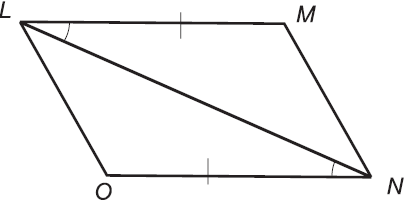
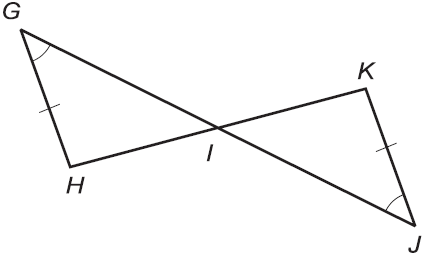
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| 7. and are congruent triangles. Using this information, list the corresponding sides and corresponding angles. |
| 8. For ΔEFG and ΔMNP, it is known that , <G<P, and . Determine if the triangles are congruent, and if so, by which type of congruency.   1. SSS c. ASA 2. SAS D. It cannot be determined if the triangles are congruent. |
| 9. In this diagram, is the perpendicular bisector of The two-column proof shows that is congruent to . Fill in the missing pieces of the proof.     |  |  |  | | --- | --- | --- | | **Step** | **Statement** | **Reason** | | 1 | is the perpendicular bisector of | Given | | 2 |  | Definition of bisector | | 3 |  |  | | 4 |  | Definition of perpendicular lines | | 5 |  | All right angles are congruent | | 6 |  |  | | 7 |  |  | |
| **10. Given:**  and  **Prove:**   |  |  |  | | --- | --- | --- | | **Steps** | **Statements** | **Reasons** | | 1 | and |  | | 2 |  |  | | 3 |  |  | | 4 |  |  | | 5 |  |  | | 6 |  |  | |
| **11. Given:** E is the midpoint of  **Prove:**   |  |  |  | | --- | --- | --- | | **Steps** | **Statements** | **Reasons** | | 1 |  | Given | | 2 |  |  | | 3 |  |  | | 4 |  |  | | 5 |  |  | |
| **12.**  and are congruent triangles. Which statement is known to be true?  a. c.    b. d. |
| 13. For and , the following is given: , , and . By which triangle congruence statement can it be concluded that the triangles are congruent?  a. SSS c. ASA  b. SAS d. It cannot be determined if the triangles are congruent. |
| 14. ΔUVW and ΔXYZ are congruent triangles. Which statement is known to be true?   1. <U  <V c. <V <X 2. <W <X d. <V <Y |

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| 15. Name all angles for each description.  Corresponding\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Alternate Interior\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Alternate Exterior\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Vertical\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Same side interior\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 16. Identify all angle measures. |

**Congruent Triangles**

17. Determine whether each pair of triangles is congruent. If so, write a congruence statement, and explain why the triangles are congruent.

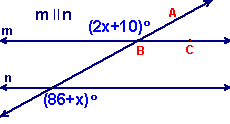
 

18. For ∆ABC and ∆DEF the following is given: . Sketch a picture to determine if the two triangles can be proven congruent. If so, create a two column proof.

**Theorems about Lines and Angles**

19. Name the relationship and then find the missing angle measures by solving for x.

1. b.

c. d.

