Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Unit 3 Test Review: Triangle Congruency & Quadrilaterals**



1. $∆CAT≅∆JSD$, list 3 pairs of congruent sides.

**List 3 pairs of congruent angles.**



1. Given ∆*ABC* ≅ ∆*DEF, m*∠*A* = 30, and *m*∠*E* = 65, what is *m*∠*C?*



1. Write a congruent statement for the figure at the right.
2. For each figure below, determine whether the triangles are congruent by one of the shortcuts. If they are congruent, **WRITE THE CONGRUENCE STATEMENT**. If they are not congruent, explain why not.





1. For each problem, determine what else must be congruent to prove the triangles congruent.
2. $SSS: \overbar{BA}≅\overbar{ED},\overbar{AC}≅\overbar{DF}, \\_\\_\\_\\_\\_\\_≅\\_\\_\\_\\_\\_\\_\\_$
3. $SAS: \overbar{BA}≅\overbar{ED},\overbar{AC}≅\overbar{DF}, \\_\\_\\_\\_\\_\\_≅\\_\\_\\_\\_\\_\\_\\_$
4. $ASA: \overbar{BC}≅\overbar{EF},∠B≅∠E, \\_\\_\\_\\_\\_\\_≅\\_\\_\\_\\_\\_\\_\\_$
5. $AAS: \overbar{BC}≅\overbar{EF},∠B≅∠E, \\_\\_\\_\\_\\_\\_≅\\_\\_\\_\\_\\_\\_\\_$
6. **Given:** $\overbar{AB}∥\overbar{CD}$, $\overbar{AB}≅\overbar{CD}$

**Prove:** $∆ABC≅∆DCB$

1. **Given:** $\overbar{YX}≅\overbar{WX}$**,** $\overbar{ZX}$ bisects $∠YXW$

**Prove:**$ ∆XYZ≅∆WXZ$

1. **Given:** $\overbar{RT}≅\overbar{VT}$, $ ∠RST≅∠VUT$

**Prove:** T is the midpoint of $\overbar{SU}$

1.  **Given:** $\overbar{HG}≅\overbar{IJ}$, $\overbar{FG}≅\overbar{FJ}$

 **Prove:** $\overbar{HF}≅\overbar{IF}$

**Find the values of the missing variables.**



1. **12.**



 14. Determine the measure of the angles

 *m*∠*ACB =*

 *m*∠*DCE =*

 *m*∠*BCD =*





16. Find the missing variables in the parallelogram

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17. Find the following for rhombus *PQRS.*

1. $m∠QRT=$
2. $m∠PTS=$
3. $m∠QRS=$
4. $m∠TSR=$
5. $m∠PQR=$

**4**

1. $m∠TQR=$
2. $PR=$
3. $QT=$
4. $QS=$
5. $RS=$



18. Find the following using the kite.

1. $m∠MTI=$
2. $m∠KMI=$
3. $m∠MKE=$
4. $IT=$
5. $KT=$
6. $KE=$
7. $ET=$
8. Perimeter of kite *KITE*

19. What quadrilaterals have all sides congruent?

20. What quadrilaterals have opposite sides congruent?

21. What quadrilaterals have opposite angles congruent?

22. The diagonals of square *DEFG* intersect at *H.* Given that *EH =* 5, find the following.

1. $m∠DHE=$
2. $m∠EFG=$
3. $m∠HGF=$
4. $m∠GDH=$
5. $GH=$
6. $DF=$
7. $DG=$
8. $DE=$

23. Find *x* in the following trapezoids.





24*. ABCD* is an isosceles trapezoid. Find the following values.



1. $m∠BCD=$
2. $m∠BAD=$
3. $x=$
4. $AB=$
5. $CD=$

25. What quadrilaterals have perpendicular diagonals?

26. What quadrilaterals have congruent diagonals?

27. What quadrilaterals have diagonals that bisect each other?

28. What properties do a square and rhombus share?