

7. Define the following words or symbols.

- a. congruent b. \cong c. \perp

- a.) Figures are congruent if they have exactly the same size and shape, regardless of location or orientation.
 b.) The symbol \cong means “is congruent to.”
 c.) The symbol \perp means “is perpendicular to.”

8. Standardized Test Prep Anna has a simple rule for deciding which symbol to use.

Objects are congruent. Measurements of objects are equal.

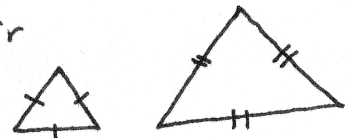
Which of the following statements is NOT written correctly according to Anna’s rule?

- A. $\overline{DF} \cong \overline{RT}$ B. $m\angle CSD \cong m\angle BSL$
 C. $\angle ADF \cong \angle WZM$ D. $AC = FH$

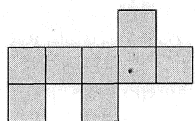
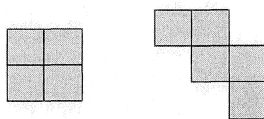
statement B is not written correctly because... it states that one angle measure is the same size and shape as another angle's measure

9. Are all equilateral triangles congruent? Explain.

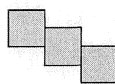
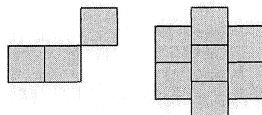
No. Equilateral triangles are not congruent if their side lengths are different



Polyominoes are shapes that are made of squares. The sides of polyominoes meet edge to edge with no gaps or overlaps. The three shapes on the left are polyominoes. The three shapes on the right are not polyominoes, because the squares do not meet edge to edge.



polyominoes



not polyominoes



Congruent polyominoes that have different orientations are not different polyominoes.

Use words and pictures to help answer the following questions.

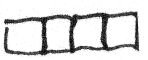




10. **Dominoes:** How many different polyominoes can you make with two squares?

One 

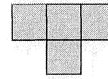
11. **Trominoes:** How many different polyominoes can you make with three squares?

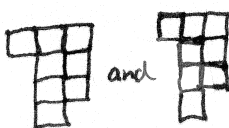



two  or 

12. **Tetrominoes:** How many different polyominoes can you make with four squares?

five  or  or  or  or 

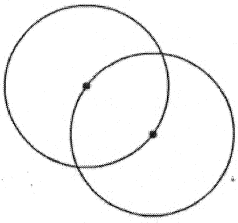
13. Combine the T tetromino (polyomino with 4 squares) at the right with another tetromino to make an eight-square polyomino. How many tetromino shapes can you combine with the T tetromino to get this shape?

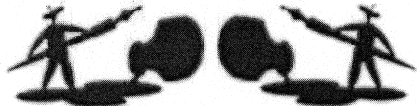


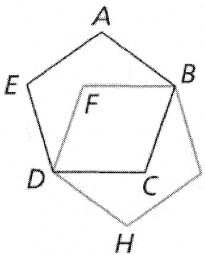
Example:  and  } Example:  and 

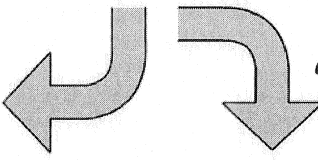
two two

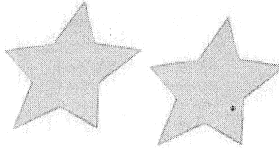
14. Assume you can use any tool or method. Describe how you can decide whether the figures in each pair are congruent.

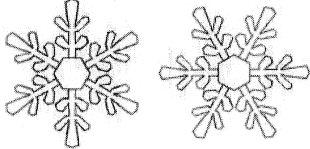
a.  measure the radii of the circles.
two circles

b.  Fold along the vertical line between the figures to see if they match.
two artists

c.  Fold along the line between points B and D to see if the figures match.
two pentagons, ABCDE and BGHDF

d.  Trace one of the arrows, rotate it, and see if it matches the other arrow.
two bent arrows

e.  Trace one of the stars, translate it on top of the other star to see if they match.
two stars

f.  Trace one of the snowflakes, rotate and/or translate it on top of the other snowflake to see if they match.
two snowflakes