

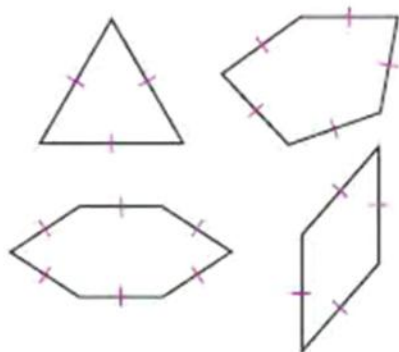


Investigation

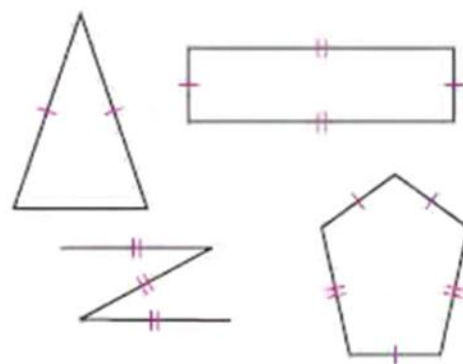
Special Polygons

Write a good definition of each boldfaced term. Discuss your definitions with others in your group. Agree on a common set of definitions for your class and add them to your definitions list. In your notebook, draw and label a figure to illustrate each definition.

Equilateral Polygon

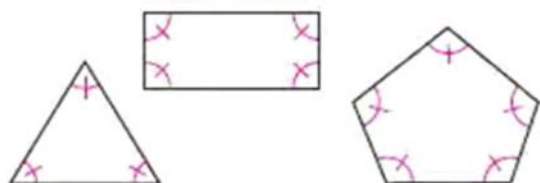


Equilateral polygons

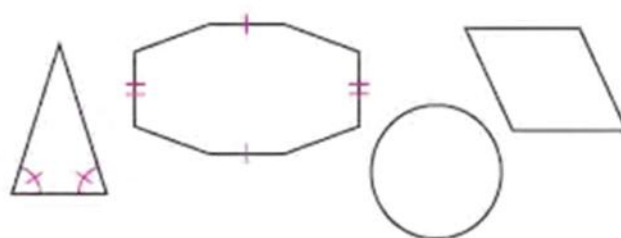


Not equilateral polygons

Equiangular Polygon

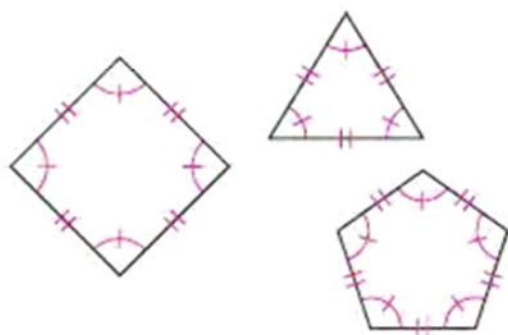


Equiangular polygons

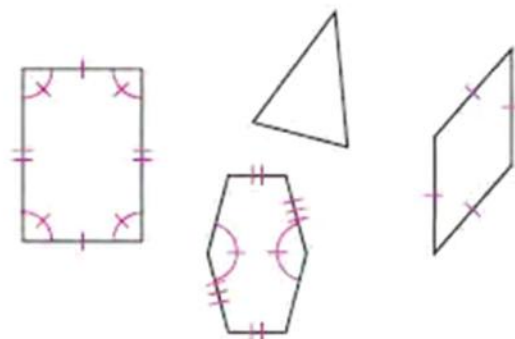


Not equiangular polygons

Regular Polygon



Regular polygons



Not regular polygons

1-4 Exercises

Lesson 1.4 • Polygons

Name _____ Period _____ Date _____

For Exercises 1–8, complete the table.

Polygon name	Number of sides	Number of diagonals
1. Triangle		
2.		2
3.	5	
4. Hexagon		
5. Heptagon		
6.	8	
7.		35
8.	12	

For Exercises 9 and 10, sketch and label each figure. Mark the congruences.

9. Concave pentagon *PENTA*, with external diagonal \overline{ET} , and $\overline{TA} \cong \overline{PE}$.

10. Equilateral quadrilateral *QUAD*, with $\angle Q \neq \angle U$.

For Exercises 11–14, sketch and use hexagon *ABCDEF*.

11. Name the diagonals from *A*.
12. Name a pair of consecutive sides.
13. Name a pair of consecutive angles.
14. Name a pair of non-intersecting diagonals.

For Exercises 15–18, use the figures at right.

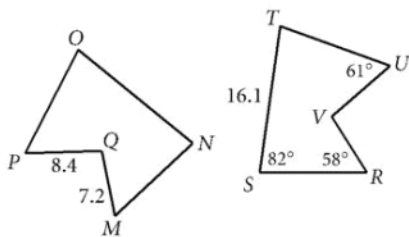
$MNOPQ \cong RSTUV$

15. $m\angle N =$ _____

16. $VR =$ _____

17. $m\angle P =$ _____

18. $ON =$ _____



19. The perimeter of a regular pentagon is 31 cm. Find the length of each side.