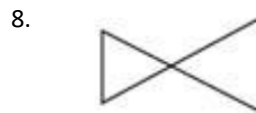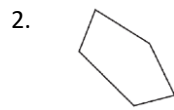# Unit 6.6 Convex and concave, types of polygons PRACTICE   **Period:** _____
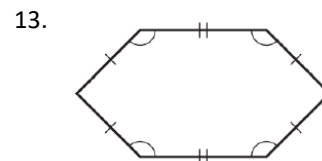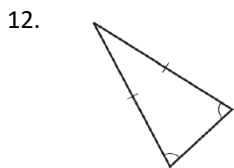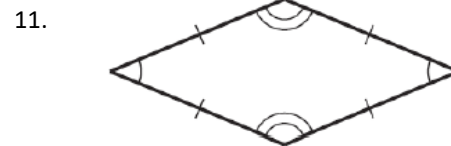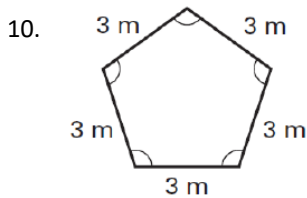
Tell whether the figure is a polygon. If it is not, explain why.
If it is a polygon, tell whether it is convex or concave and give the name of the polygon.

1.

2.

3.

4.

5.

6.

7.

8.

9.

Classify the polygon by the number of sides. Tell which terms apply to the polygon: equilateral, equiangular, regular, or not regular.

10.   3 m   3 m

       3 m   3 m

          3 m

11.

12.

13.

14.   The lengths of two sides of a regular quadrilateral are represented by the expressions $8x - 6$ and $4x + 22$.
       Find the length of a side of the quadrilateral.

15.   The expressions $(3x + 63)°$ and $(7x - 45)°$ represent the measures of two angles of a regular decagon.
       Find the measure of an angle of the decagon.

Tell whether the statement is always, sometimes, or never true.

16. A quadrilateral is convex.

17. An octagon is regular.

18. A triangle is concave.

19. A regular polygon is equilateral.

Draw a figure that fits the description.
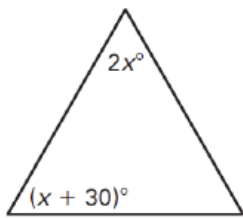
20. A triangle that is not regular
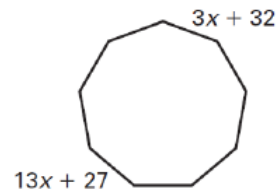
21. A convex heptagon

22. A concave pentagon

23. An equiangular quadrilateral that is not equilateral
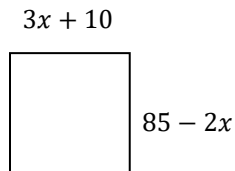
Each figure is a regular polygon. Find the value of x.
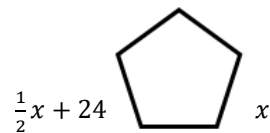
24.

$2x°$

$(x + 30)°$

25.

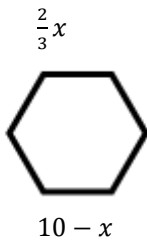$3x + 32$

$13x + 27$

26.

$3x + 10$

$85 - 2x$

27.

$\frac{1}{2}x + 24$

x

28.

$\frac{2}{3}x$

$10 - x$

29.

$3x + 10$

$4x - 10$