Polygon Angles and Angle Sums

Name_____

Period   2   4   5   6
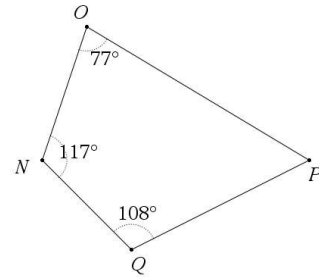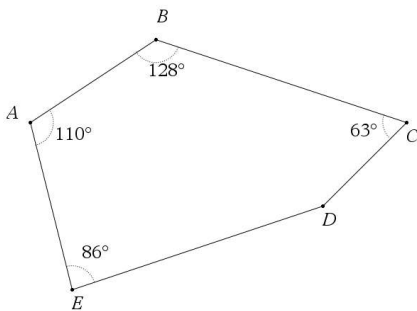
S
119°

39°
R   T

1. Determine the measure of angle T

2. Determine the measures of the exterior angles

    Exterior to angle R _____

    Exterior to angle S _____

    Exterior to angle T _____

3. Determine the sum of the interior angles of polygon SRT

4. Determine the sum of the exterior angles of polygon SRT
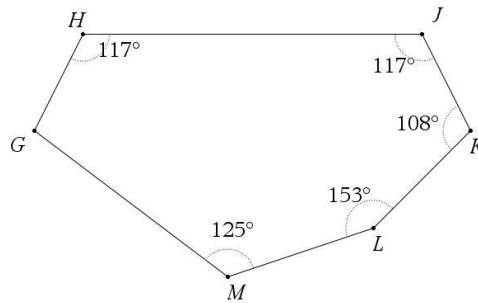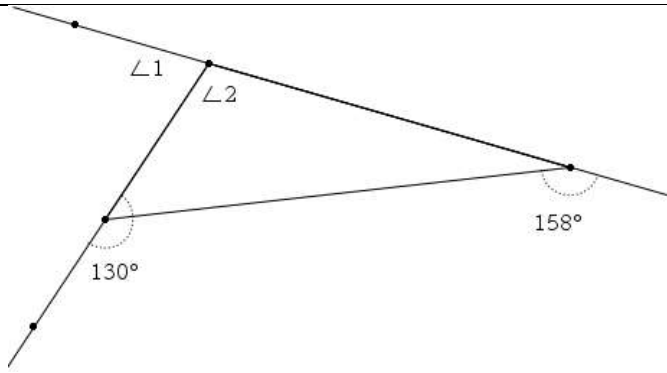
O
77°

117°
N
108°
Q
P

5. Determine the measure of angle P

6. Determine the measures of the exterior angles

    Exterior to angle N _____

    Exterior to angle O _____

    Exterior to angle P _____

    Exterior to angle Q _____

7. Determine the sum of the interior angles of polygon NOPQ

8. Determine the sum of the exterior angles of polygon NOPQ

B
128°
A
110°   63° C
                    D
86°
E

9. Determine the measure of angle D

10. Determine the measures of the exterior angles

    Exterior to angle A _____

    Exterior to angle B _____

    Exterior to angle C _____

    Exterior to angle D _____

    Exterior to angle E _____

11. Determine the sum of the interior angles of polygon ABCDE

12. Determine the sum of the exterior angles of polygon ABCDE

H   J
117°   117°
                        108°
G   K
            153°
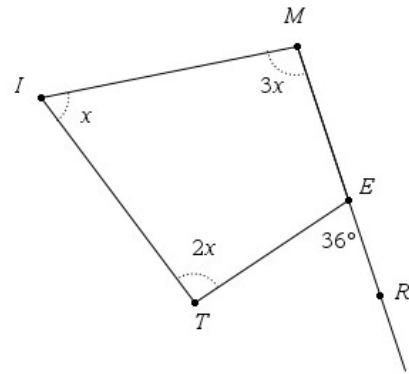   125°   L
M

13. Determine the measure of angle G

14. Determine the measures of the exterior angles

    Exterior to angle G _____

    Exterior to angle H _____

    Exterior to angle J _____

    Exterior to angle K _____

    Exterior to angle L _____

    Exterior to angle M _____

15. Determine the sum of the interior angles of polygon GHJKLM

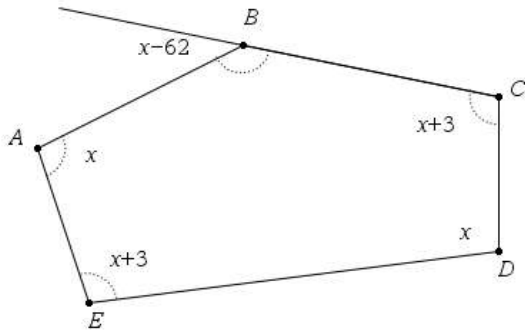16. Determine the sum of the exterior angles of polygon GHJKLM

∠1
∠2
158°
130°

17. Which of the numbered angles (1 or 2) is an exterior angle?

18. Which of the numbered angles is an interior angle (1 or 2)?

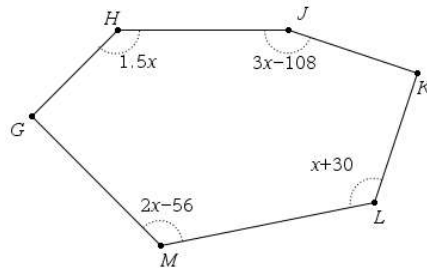19. Determine the measure of angle 1 using two different methods
    Method 1

    Method 2

M
I
3x
x
E
2x
36°
R
T

20. Determine the value of x

21. Determine the measures of the angles

    Angle T _____

    Angle I _____

    Angle M _____

    Angle TEM _____

B
x−62
C
x+3
A
x
x
D
x+3
E

22. Determine the value of x

23. Determine the measures of the angles

    angle A _____

    angle ABC _____

    angle C _____

    angle D _____

    angle E _____

H
J
1.5x
3x−108
K
G
x+30
2x−56
L
M

$$\overline{JK} \perp \overline{KL}$$

24. Determine the value of x

25. Determine the measures of the angles

    angle G _____

    angle H _____

    angle J _____

    angle K _____

    angle L _____

    angle M _____