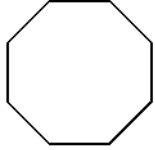


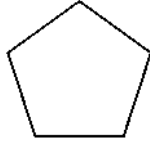
6.1 – Angles in Polygons

Find the sum of the angle measure of each polygon.

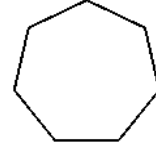
1)



2)



3)



4) 18-gon

5) 102-gon

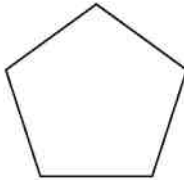
6) 90-gon

Find the measure of one angle in each regular polygon. Round to the nearest tenth if necessary.

7)



8)



9)



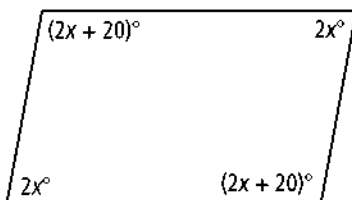
10) Regular 15-gon

11) Regular 360-gon

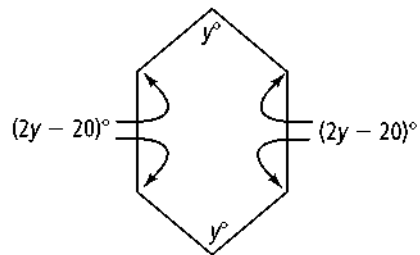
12) Regular 144-gon

Find the missing angle measures. Show all algebraic work.

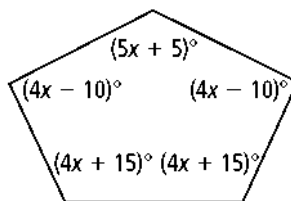
13)



14)

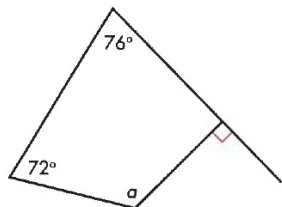


15)

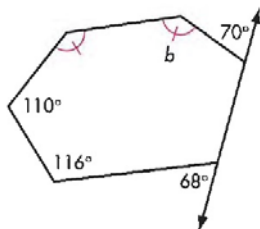


Find the missing variables.

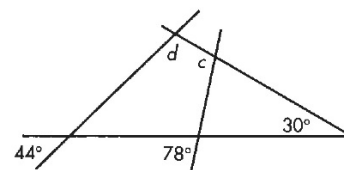
16) $a = \text{---}$



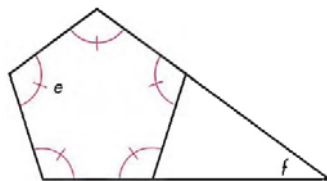
17) $b = \text{---}$



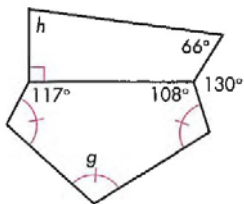
18) $c = \text{---}$
 $d = \text{---}$



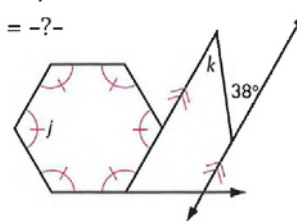
19) $e = \text{---}$
 $f = \text{---}$

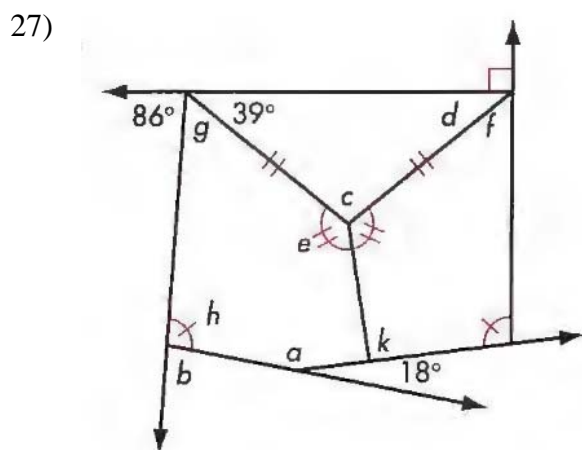
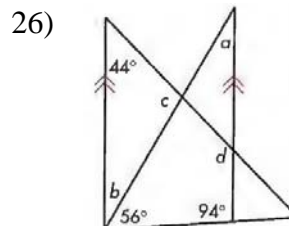
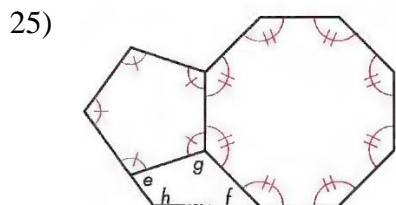
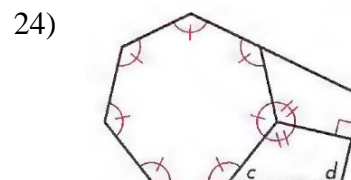
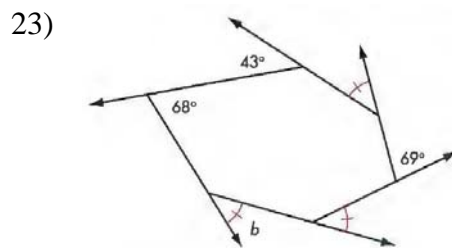
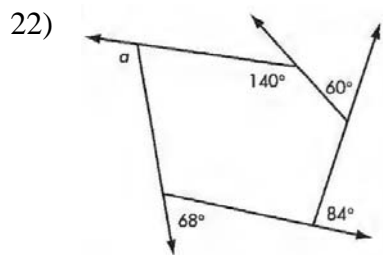


20) $g = \text{---}$
 $h = \text{---}$



21) $j = \text{---}$
 $k = \text{---}$





$a = \underline{\hspace{1cm}}$ $d = \underline{\hspace{1cm}}$ $g = \underline{\hspace{1cm}}$
 $b = \underline{\hspace{1cm}}$ $e = \underline{\hspace{1cm}}$ $h = \underline{\hspace{1cm}}$
 $c = \underline{\hspace{1cm}}$ $f = \underline{\hspace{1cm}}$ $k = \underline{\hspace{1cm}}$

28) What is the sum of the measures of a set of exterior angles of a decagon?

29) Four exterior angles of a pentagon measure 63° , 67° , 58° , and 64° . What is the measure of the remaining exterior angle?

- 30) What is the measure of each exterior angle of a regular hexagon?
- 31) How many sides does a regular polygon have if each exterior angle measures 24° ?
- 32) What is the sum of the measures of the interior angles of a dodecagon?
- 33) How many sides does a polygon have if the sum of its interior angle measures is 7380° ?
- 34) What is the measure of each interior angle of a regular octagon?
- 35) How many sides does a regular polygon have if each of its interior angles measures 165° ?