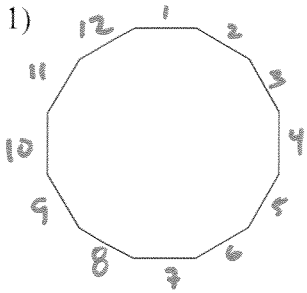
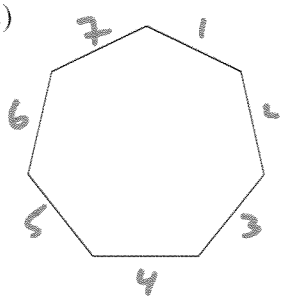
Practice 5.1

Find the interior angle sum for each polygon. Round your answer to the nearest tenth if necessary.

1) 

$180(n-2)$
$180(12-2)$
$180(10)$
$= 1800°$

2) 

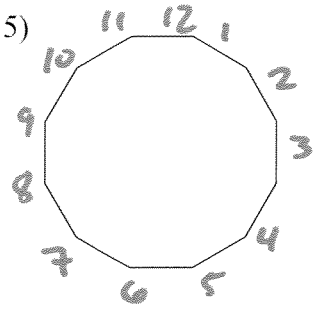
$180(n-2)$
$180(7-2)$
$180(5)$
$= 900°$

USE $180(n-2)$

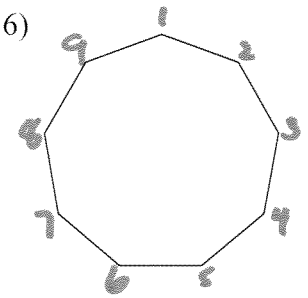
3) regular 19-gon $180(n-2)$ $180(19-2)$ $= 3060°$

4) regular 14-gon $180(14-2)$ $= 2160°$

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

5) 

12 angles
$12n = 360$
$n = \frac{360}{12}$
$n = 30°$

6) 

9 angles
$9n = 360$
$n = 40°$

Count # of sides
360/s

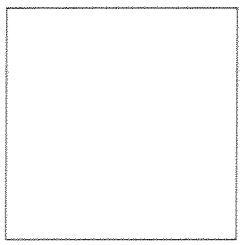
7) regular octagon $8n = 360$ $n = 45°$

8) regular 15-gon $15n = 360$ $n = 24°$

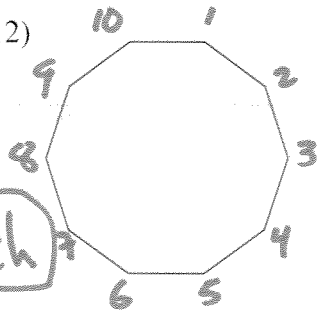
9) regular 11-gon $11n = 360$ $n = 32.7°$

10) regular pentagon $5n = 360$ $n = 72°$

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

11) 

$180(n-2)$
$180(4-2)$
$180 \cdot 2$
$= 360°$ ← TOTAL SUM
$\frac{360°}{4 \text{ angles}}$
$= 90°$ each

12) 

$180(10-2)$
$180(8)$
$= 1440°$ TOTAL SUM
$\frac{1440}{10} = 144°$ each

13) regular 14-gon See #4 → $\frac{2160}{14} = 154.3°$ each

14) regular 24-gon TOTAL SUM = $180(24-2) = 3960°$
$\frac{3960}{24} = 165°$ each

15) regular 20-gon $180(20-2)$
$= 3240°$ total sum
$\frac{3240}{20} =$
$= 162°$ each

16) regular 17-gon $180(17-2)$
$= 2700°$ total
$\frac{2700°}{17} = 158.8°$ each