Geometry **Name:** _____

Unit 3—parallel line vocabulary **Period:** _____

Day 11polygon & angle measure answers

Interior & Exterior Angles of Polygons

Show your work/explanations in each of the text boxes provided for each problem.

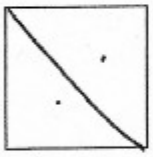
Find the interior angle sum for each polygon. Round your answer to the nearest tenth if necessary.

1) 

1) $4 \cdot 180 = 720^\circ$

2) 

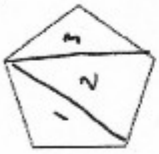
2) $8 \cdot 180 = 1440^\circ$

3) 

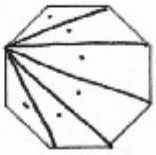
3) $2 \cdot 180 = 360^\circ$

4) 

4) $5 \cdot 180 = 900^\circ$

5) 

5) $3 \cdot 180 = 540^\circ$

6) 

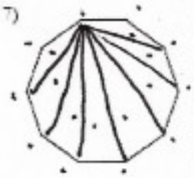
6) $6 \cdot 180 = 1080^\circ$

Geometry **Name:** _____

Unit 3—parallel line vocabulary **Period:** _____

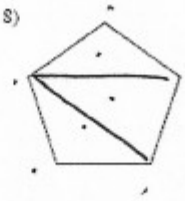
Day 11—polygon & angle measure answers

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

7) 

7) $8 \cdot 180 = 1440^\circ$

$\frac{1440}{10} = 144^\circ$

8) 

8) $3 \cdot 180 = 540$

$\frac{540}{5} = 108^\circ$

9) regular nonagon

9) $9-2 \cdot 180$

$7 \cdot 180 = \frac{1260}{9} = 140^\circ$

10) regular hexagon

10) $6-2 \cdot 180$

$4 \cdot 180 = \frac{720}{6} = 120^\circ$

11) regular 17-gon

11) $17-2 \cdot 180$

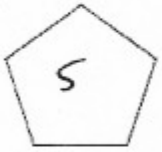
$15 \cdot 180 = \frac{2700}{17} = 158.8^\circ$

12) regular 24-gon

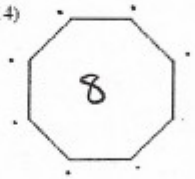
12) $24-2 \cdot 180$

$22 \cdot 180 = \frac{3960}{24} = 165^\circ$

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

13) 

13) $\frac{360}{5} = 72^\circ$

14) 

14) $\frac{360}{8} = 45^\circ$

15) regular 14-gon

15) $\frac{360}{14} = 25.7^\circ$

16) regular 20-gon

16) $\frac{360}{20} = 18^\circ$