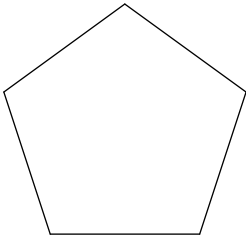


Polygons and Angles

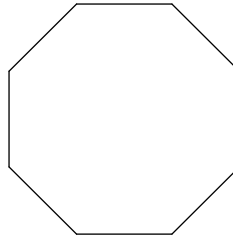
Date _____ Period _____

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

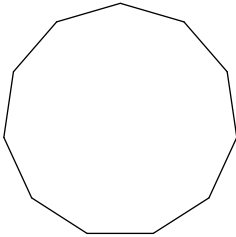
1)



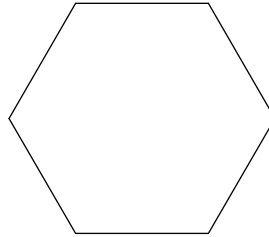
2)



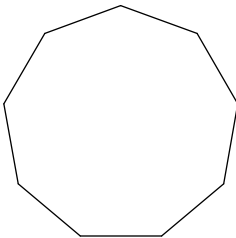
3)



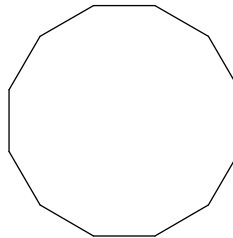
4)



5)



6)



7) regular 24-gon

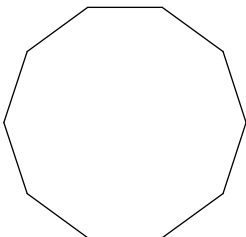
8) regular quadrilateral

9) regular 23-gon

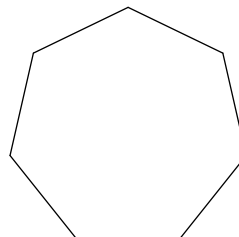
10) regular 16-gon

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

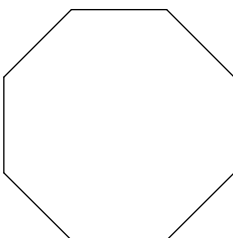
11)



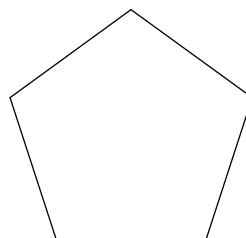
12)



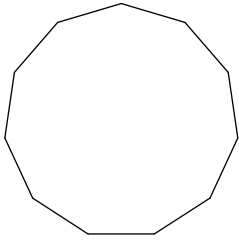
13)



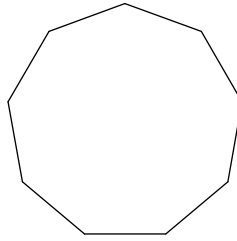
14)



15)



16)



17) regular 13-gon

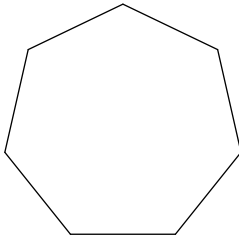
18) regular 16-gon

19) regular 20-gon

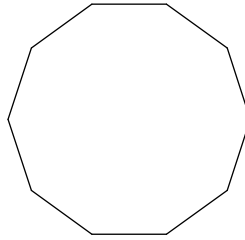
20) regular 23-gon

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

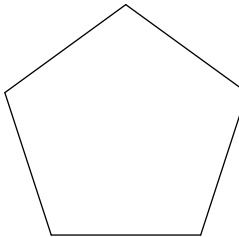
21)



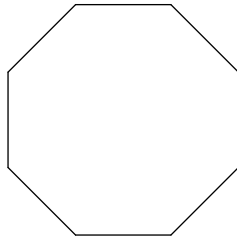
22)



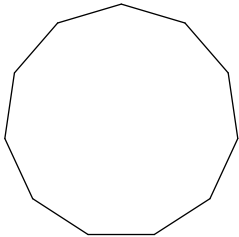
23)



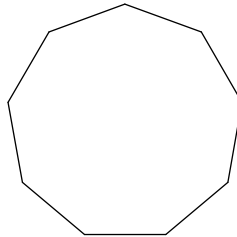
24)



25)



26)



27) regular quadrilateral

28) regular 18-gon

29) regular dodecagon

30) regular 15-gon

Critical thinking questions:

31) What is the exterior angle sum of a 500-gon?

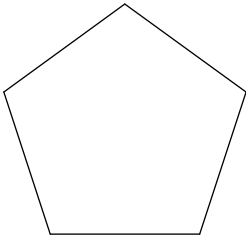
32) Is there a regular polygon with an interior angle sum of 9000° ? If so, what is it?

Polygons and Angles

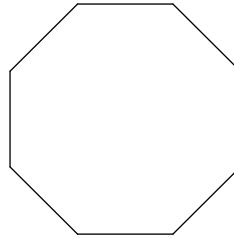
Date _____ Period _____

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

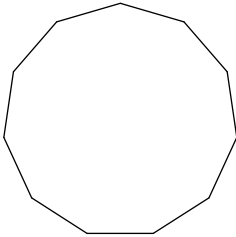
- 1)
- 108°



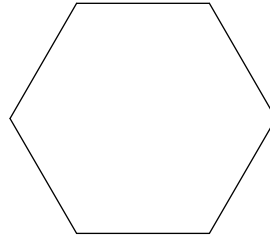
- 2)
- 135°



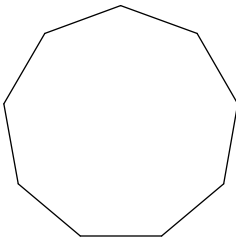
- 3)
- 147.3°



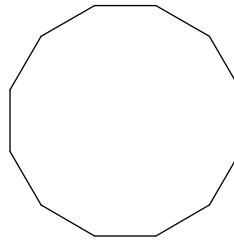
- 4)
- 120°



- 5)
- 140°



- 6)
- 150°



- 7) regular 24-gon
- 165°

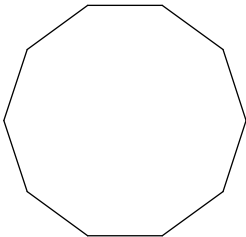
- 8) regular quadrilateral
- 90°

- 9) regular 23-gon
- 164.3°

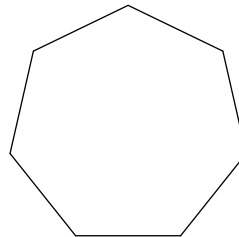
- 10) regular 16-gon
- 157.5°

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

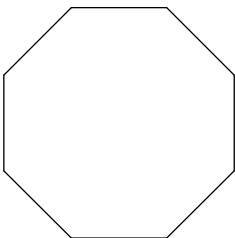
- 11)
- 36°



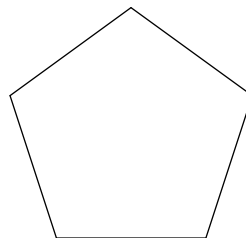
- 12)
- 51.4°



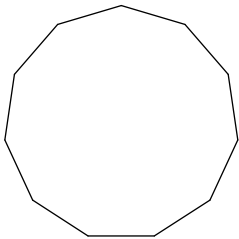
- 13)
- 45°



- 14)
- 72°



15)



32.7°

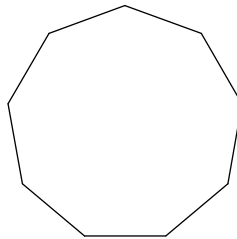
17) regular 13-gon

27.7°

19) regular 20-gon

18°

16)



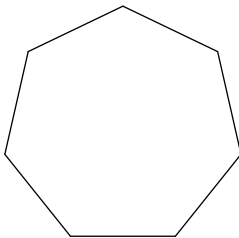
40°

18) regular 16-gon 22.5°

20) regular 23-gon 15.7°

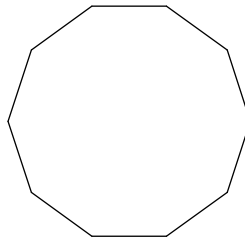
Find the interior angle sum for each polygon. Round your answer to the nearest tenth if necessary.

21)



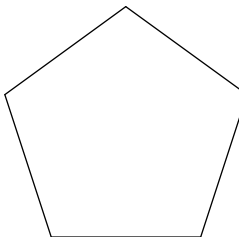
900°

22)



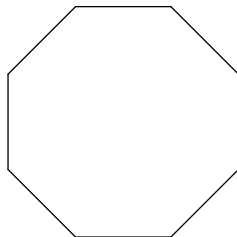
1440°

23)



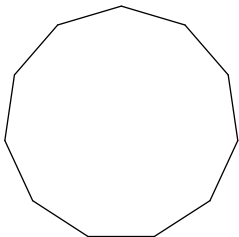
540°

24)



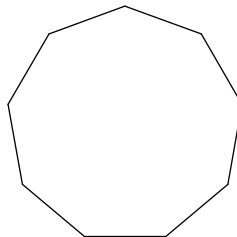
1080°

25)



1620°

26)



1260°

27) regular quadrilateral

360°

28) regular 18-gon 2880°

29) regular dodecagon

1800°

30) regular 15-gon 2340°

Critical thinking questions:

31) What is the exterior angle sum of a 500-gon?

360°

32) Is there a regular polygon with an interior angle sum of 9000° ? If so, what is it?

Yes, regular 52-gon.