Name_

Area of Regular Polygons

_____ Period____

Find the area of each regular polygon. Leave your answer in simplest form.





Date___







7) pentagon apothem = 7.3 side = 10.6



8) triangle apothem = 14 side = $28\sqrt{3}$ 9) 7-gon apothem = 21.8 side = 21 10) octagon apothem = 14.1side = 11.7

Use what you know about special right triangles to find the area of each regular polygon. Leave your answer in simplest form.



Critical thinking questions:

- 17) Find the perimeter of a regular hexagon that has an area of $54\sqrt{3}$ units².
- 18) Can a regular octagon have an area of 10 units²?

-2-

Name_

Area of Regular Polygons

_____ Period____

Find the area of each regular polygon. Leave your answer in simplest form.





Date___







7) pentagon apothem = 7.3 side = 10.6 193.45



8) triangle $588\sqrt{3}$ apothem = 14 side = $28\sqrt{3}$

9) 7-gon	10) octagon
apothem $= 21.8$	apothem $= 14.1$
side = 21	side = 11.7
1602.3	659.88

Use what you know about special right triangles to find the area of each regular polygon. Leave your answer in simplest form.



that has an area of $54\sqrt{3}$ units².

36 units

of 10 units²?

Yes, it just wouldn't have integral length sides.

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