

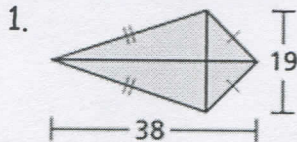
Name Key Date \_\_\_\_\_ Pd \_\_\_\_\_

### 11.3 Areas of Polygons Shaded Regions CYU

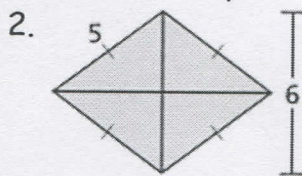
- Use when you get it right all by yourself
- Use when you did it all by yourself, but made a silly mistake
- Use when you could do it alone with a little help from teacher or peer
- Use when you completed the problem in a group
- Use when a question was attempted but wrong (get help)
- Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Area of kite or rhombus	1	2	
Vocabulary terms	4 - 6		
Area of a regular polygon & central $\angle$	7	8	
Area of shaded region of regular polygon			9 - 12

Find the area of the kite or rhombus. Show the set up.



$361 u^2$



$24 u^2$

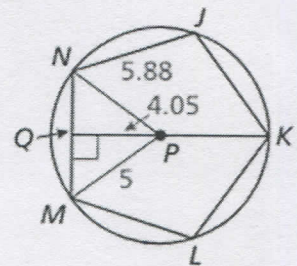
Use the diagram to answer the following questions.

3. Identify the center of polygon JKLMN. P

4. Identify a central angle of polygon JKLMN.  $\angle MPN$

5. What is the radius of polygon JKLMN?  $5u = PM$

6. What is the apothem of polygon JKLMN?  $QP = 4.05u$



Find the measure of a central angle of a regular polygon with the given number of sides. Round answers to the nearest tenth of a degree, if necessary.

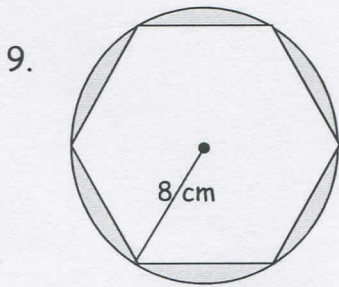
7. 18 sides

$20^\circ$

8. 7 sides

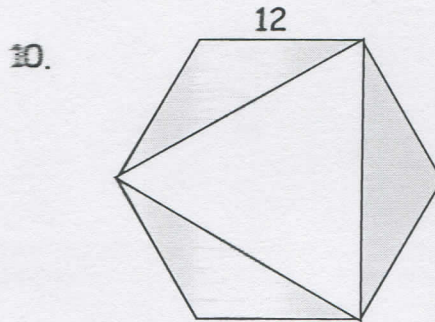
$51.4^\circ$

Find the area of each shaded region. Show ~~your~~ set up. Give the exact and approximate to the thousandths when appropriate. Do not forget units.



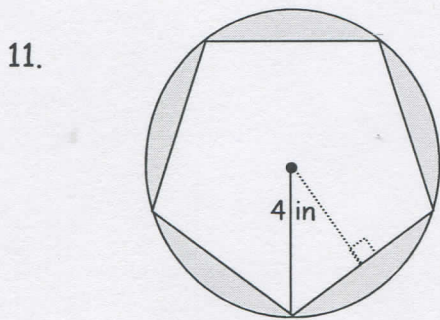
$$= 64\pi - 96\sqrt{3} \text{ cm}^2$$

$$\approx 34.785 \text{ cm}^2$$



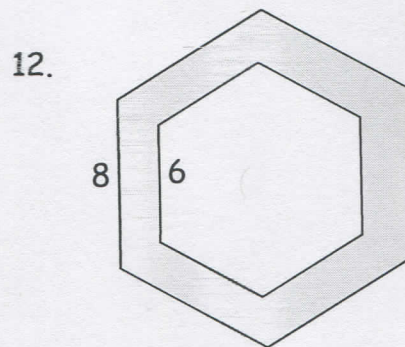
$$= 49\pi - 98 \text{ m}^2$$

$$\approx 55.938 \text{ m}^2$$



$$= 16\pi - 80(\sin 54)(\cos 54) \text{ in}^2$$

$$\approx 12.223 \text{ in}^2$$



$$= 100 - 25\pi \text{ cm}^2$$

$$\approx 21.460 \text{ cm}^2$$

**CYU Reflection:** How far can you go: basic, intermediate, or advanced?

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

●	●	●	●	●	●	●	●
1	2	3	4	5	6	7	8
Basic		Intermediate			Advanced		Solved ALL!

➔