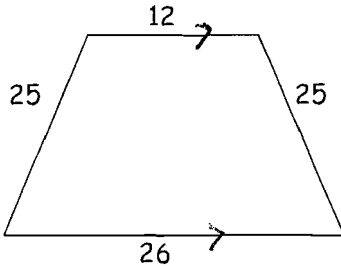


SHOW WORK. GIVE EXACT ANSWERS IN SIMPLEST FORM. (Do not round off decimals unless requested.)

1. Find area.

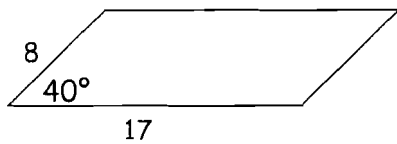


2. Find the area of an equilateral triangle with height 15.

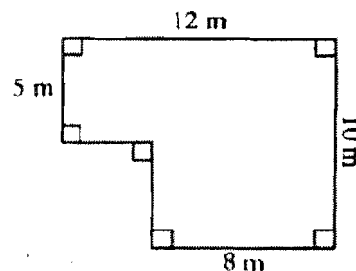
3. Find the area of a rhombus with perimeter 68 cm and longer diagonal 30 cm.

4. The apothem of an equilateral triangle is 4 cm. Find radius, perimeter, and area.

5. Find the area of the parallelogram. Round answer to the nearest tenth.

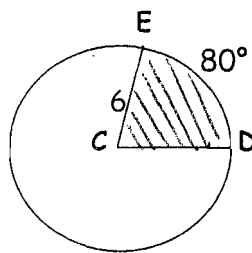


6. How much will it cost to blacktop the area shown if blacktopping costs \$15 per square meter?

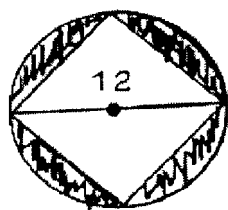


7. The area of a circle is  $616 \text{ in}^2$ . Find the circumference. Use  $\frac{22}{7}$  for  $\pi$ .

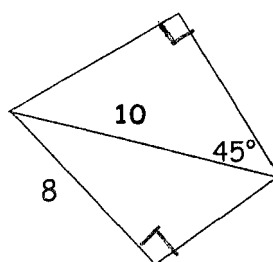
8. In circle  $C$ , find the length of arc  $ED$  and the area of the shaded sector in terms of  $\pi$ .



9. Find the area of the shaded region. Use  $\pi \approx 3.14$ .

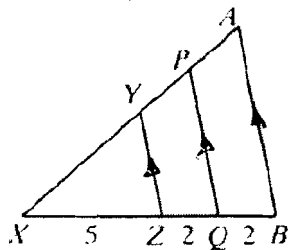


10. Find the area of the quadrilateral shown.

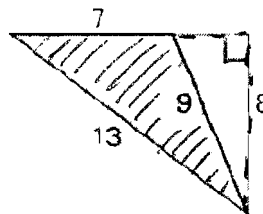


11. Find each ratio:

- $AB : YZ$
- perimeter  $\triangle XAB$  : perimeter  $\triangle XYZ$
- area  $\triangle XAB$  : area  $\triangle XYZ$



12. Find the area of the shaded obtuse triangle shown.



13. The areas of 2 similar polygons are in a ratio of 1:16. The shortest side of the smaller polygon is 5. Find the shortest side of the larger polygon.