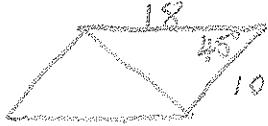


Set up each of the following problems and solve.

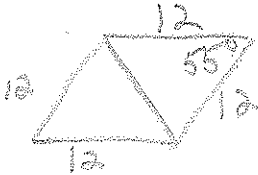
1. Find the area of a parallelogram that has a 45° angle and sides with lengths 10 and 18.



$$K = \frac{1}{2}(18)(10)\sin 45^\circ$$

$$= 63.64 \times 2 = \boxed{127.28 \text{ sq units}}$$

2. Find the area of a rhombus that has perimeter 48 and an angle of 55° .



$$K = \frac{1}{2}(12)(12)\sin 55^\circ$$

$$= 58.98 \times 2 = \boxed{117.96 \text{ sq units}}$$

3. The area of $\triangle ABC$ is 36 square units. If $\angle B = 30^\circ$ and $c = 8$, find the value of a .



$$36 = \frac{1}{2}(8)(a)\sin 30^\circ$$

$$\boxed{a = 18}$$

4. The area of $\triangle ABC$ is 20 square units. If $\angle A = 130^\circ$ and $b = 6$, find the value of c .



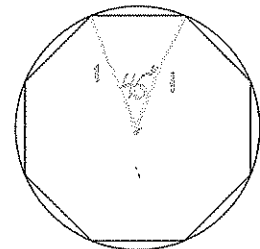
$$20 = \frac{1}{2}(6)(c)\sin 130^\circ$$

$$\boxed{c = 8.7}$$

5. Find the area of a regular octagon inscribed in a unit circle.

$$K = \frac{1}{2}(1)(1)\sin 45^\circ$$

$$K = 0.3536 \times 8 = \boxed{2.83 \text{ sq units}}$$



6. Find area of regular pentagon inscribed in a circle of radius 8cm.

$$K = \frac{1}{2}(8)(8)\sin 72^\circ$$

$$= 30.4038 \times 5$$

$$= \boxed{152.17 \text{ sq units}}$$

