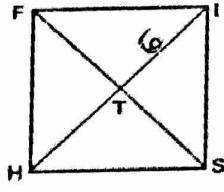


PART 4. SQUARES & RHOMBI
Find the indicated measure.

30.	FISH is a square with $IT = 6$. Find IH and IS . $m\angle IH = 12$ $m\angle IS = 6\sqrt{2}$	
31.	If MNOP is a square, what is $m\angle MNP$? 45°	

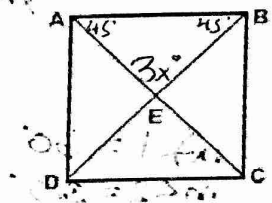
$$6^2 + 6^2 = c^2$$

$$36 + 36 = c^2$$

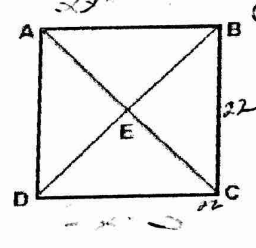
$$\sqrt{72} = \sqrt{c^2}$$

Use square ABCD and the given information to find each value.

32.	If $m\angle AEB = (3x)^\circ$, find x . $x = 30^\circ$
33.	If $m\angle BAC = (9x)^\circ$, find x . $x = 5$
34.	If $AB = 2x + 4$ and $CD = 3x - 5$, find BC. Find BC and BD. $BC = 22$ $BD = 22\sqrt{2}$
a.	The perimeter of the square is 32 cm. Find the length of diagonal DB. $8\sqrt{2}$
b.	DE = 10, find AD. $10\sqrt{2}$
c.	The area of the square is 16. Find EC. $EC = 2\sqrt{2}$ Side = 4



$$20^2 + 20^2 = c^2$$



$$2x + 4 = 3x - 5$$

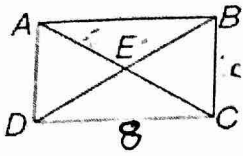
$$4 = x - 5$$

$$x = 9$$

$$AB = 2(9) + 4 = 22$$

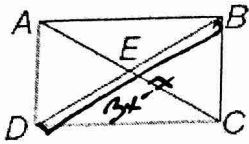
Practice Problems

a. If $AE = 5$, $BC = 6$, and $DC = 8$, find AC , BD , AD , and AB .



$$\begin{aligned} AC &= \underline{10} \\ BD &= \underline{10} \\ AD &= \underline{6} \\ AB &= \underline{8} \end{aligned}$$

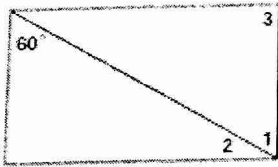
b. If $BD = 3x - 7$ and $CA = x + 5$, find BD , ED , CA , and AE .



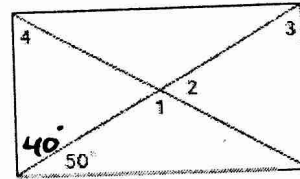
$$\begin{aligned} 3x - 7 &= x + 5 & \text{BCA} &= 11 \\ 2x - 7 &= 5 \\ 2x &= 12 \\ x &= 6 \end{aligned}$$

$$\begin{aligned} BD &= \underline{11} \\ ED &= \underline{10.5} \\ CA &= \underline{11} \\ AE &= \underline{10.5} \end{aligned}$$

c. Find the measures of the numbered angles in each rectangle.



$$\begin{aligned} m\angle 1 &= 60^\circ \\ m\angle 2 &= 30^\circ \\ m\angle 3 &= 90^\circ \end{aligned}$$

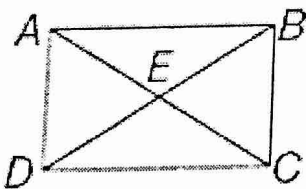


$$\begin{aligned} m\angle 3 &= 40^\circ \\ m\angle 4 &= 40^\circ \\ m\angle 2 &= 100^\circ \\ m & \end{aligned}$$

$$\begin{aligned} m\angle 1 &= \underline{60}^\circ \\ m\angle 2 &= \underline{30}^\circ \\ m\angle 3 &= \underline{90}^\circ \end{aligned}$$

$$\begin{aligned} m\angle 1 &= \underline{80}^\circ \\ m\angle 2 &= \underline{100}^\circ \\ m\angle 3 &= \underline{40}^\circ \\ m\angle 4 &= \underline{40}^\circ \end{aligned}$$

d. If $m\angle DAC = 2x + 4$ and $m\angle BAC = 3x + 1$, find $m\angle BAC$.



$$2x + 4 + 3x + 1 = 90$$

$$5x + 5 = 90$$

$$5x = 85$$

$$x = 17$$