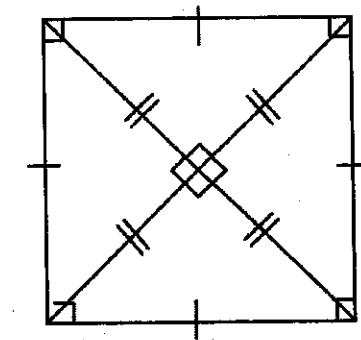


Square Characteristics

Has all the properties of a Parallelogram
 Has all the properties of a rectangle
 Diagonals are perpendicular
 4 congruent sides
 Diagonals bisect opposite angles

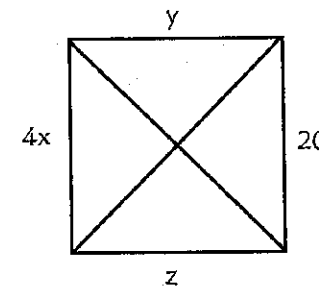
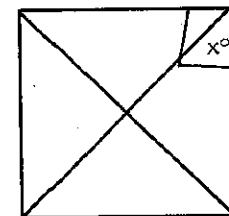


Use the squares to solve for the variables.

1. $x = 45^\circ$ 2. $x = 5$ $4x = 20$

$y = 20$

$z = 20$

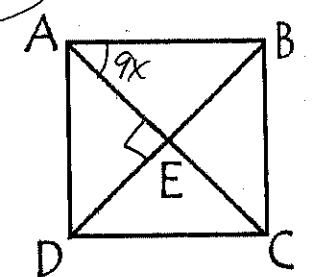


Quadrilateral ABCD is a square.

3. If $m\angle AEB = 3x$, find x . $x = 30$ $\frac{3x = 90}{3} = \frac{90}{3}$

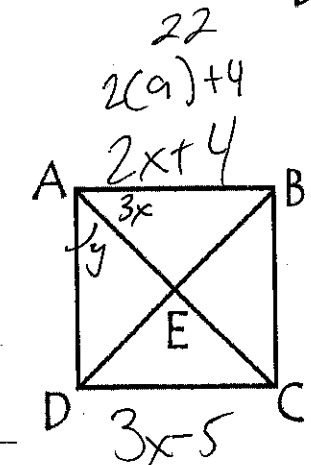
4. If $m\angle BAC = 9x$, find x . $x = 5$

$\frac{9x = 45}{9} = \frac{45}{9}$



5. If $AB = 2x + 4$ and $CD = 3x - 5$, find BC. 22

$$\begin{array}{r} 2x + 4 = 3x - 5 \\ -2x \quad -2x \\ \hline 4 = x - 5 \quad x = 9 \\ +5 \quad +5 \end{array}$$



6. If $m\angle DAC = y$ and $m\angle BAC = 3x$, find x and y . $x = 15$
 $y = 45$

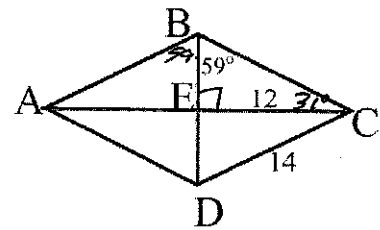
$y = 45^\circ$
 $\frac{3x = 45}{3} = \frac{45}{3} \quad x = 15$

Rhombus Characteristics

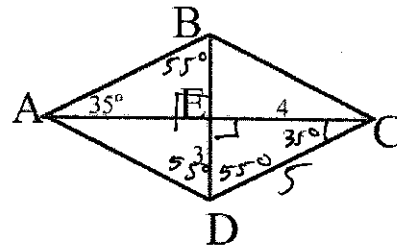
- Has all properties of a parallelogram
- Has four congruent sides
- Diagonals are perpendicular
- Each diagonal bisects a pair of opposite angles

Each quadrilateral below is a rhombus.

- 7) $m\angle BCE$ 31° 8) $m\angle BEC$ 90°
 $180 - (59 + 90) =$
- 9) AC 24 10) $m\angle ABD$ 59° 11) AD 14

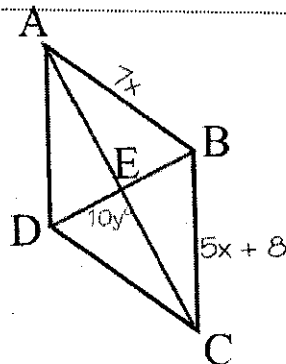


- 12) $m\angle ABD$ 55° 13) DC 5
 $180 - (35 + 90)$ $3^2 + 4^2 = 5^2$
- 14) BD 6 15) $m\angle DCE$ 35°



16) $x =$ 4
 $7x = 5x + 8$
 $2x = 8$
 $x = 4$

17) $y =$ 9
 $5x - 5y = 10y - 90$
 $10y = 90$
 $y = 9$



18) If $BE = 3x - 2$ and $DB = 7x - 22$, find x and then find BE .

$x =$ 18 $2(3x - 2) = 7x - 22$
 $BE =$ 52 $6x - 4 = 7x - 22$
 $-x = -18$
 $x = 18$
 $BE = 3(18) - 2 = 52$

