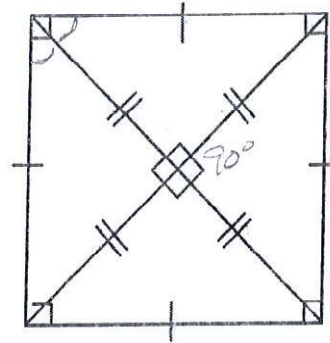


Square Characteristics

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

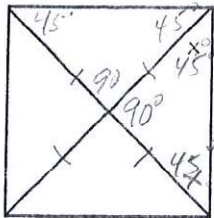


Use the squares to solve for the variables.

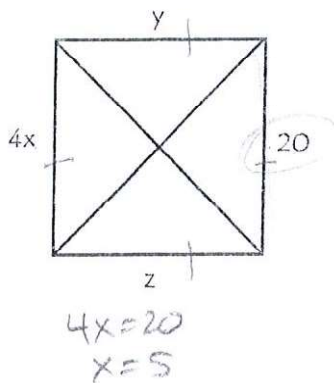
1. $x = 45^\circ$ 2. $x = 5$

$y = 20$

$z = 20$



$180 - 90 = 90$
 $\frac{90}{2} = 45^\circ$



$4x = 20$
 $x = 5$

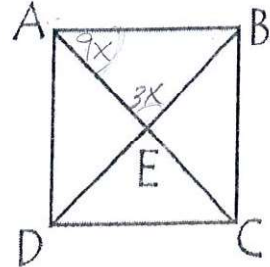
Quadrilateral ABCD is a square.

3. If $m\angle AEB = 3x$, find x . 30

$3x = 90$
 $x = 30$

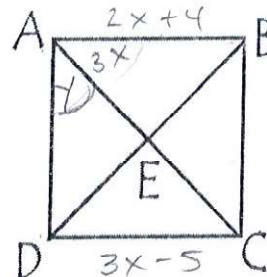
4. If $m\angle BAC = 9x$, find x . 5

$9x = 45$
 $x = 5$



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

$2x + 4 = 3x - 5$
 $4 = x - 5$
 $9 = x$
 $2(9) + 4$
 22

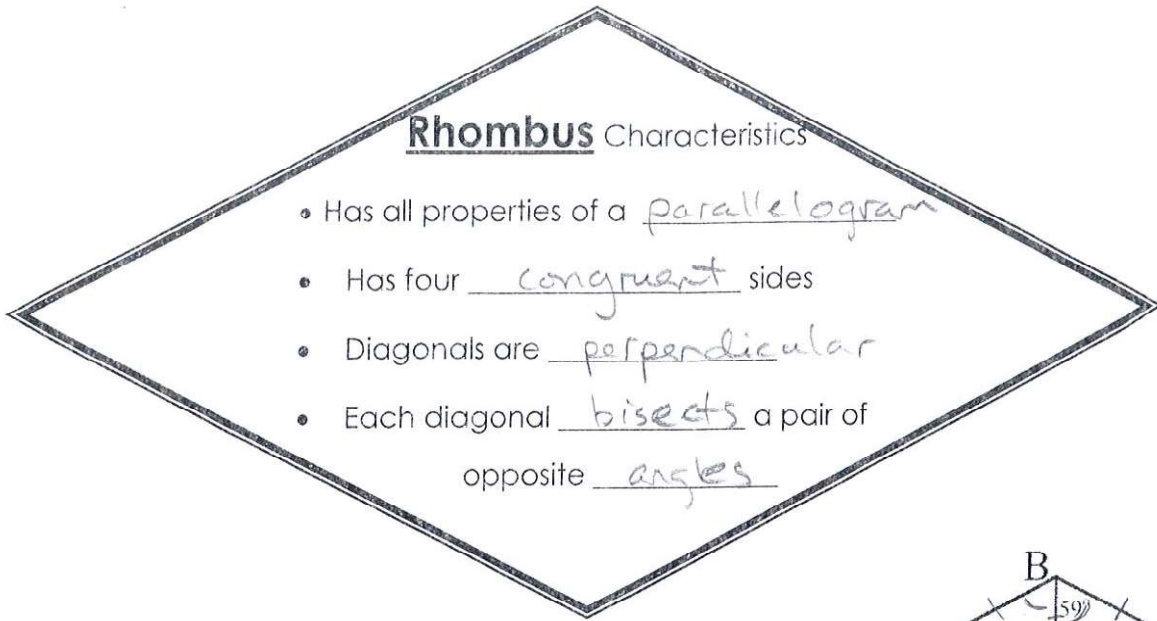


6. If $m\angle DAC = y$ and $m\angle BAC = 3x$, find x and y . _____

$y = 45^\circ$ $3x = 45$
 $x = 15$

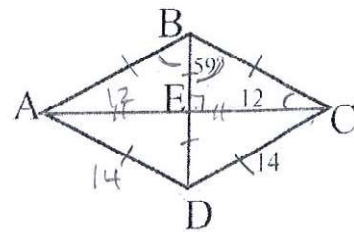
Rhombus Characteristics

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



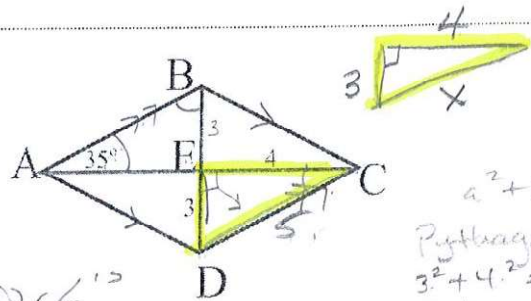
Each quadrilateral below is a rhombus.

7) $m\angle BCE$ 31° 8) $m\angle BEC$ 90°
 $180 - 90 - 59$



9) AC 24 10) $m\angle ABD$ 59° 11) AD 14

12) $m\angle ABD$ 55° 13) DC 5
 $180 - 90 - 35$

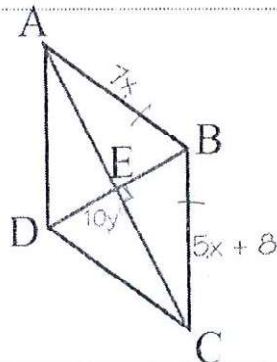


14) BD 6 15) $m\angle DCE$ 35°
 Alternate Interior \angle 's

$a^2 + b^2 = c^2$
 Pythagorean
 $3^2 + 4^2 = c^2$
 $9 + 16 = c^2$
 $25 = c^2$
 $5 = c$

16) $x =$ 4

17) $y =$ 9



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

$10y = 90$
 $y = 9$

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

$x =$ 18

$BE =$ 52

$3(18) - 2$
 $54 - 2$
 52

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

