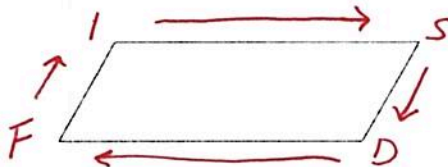


You MUST show all work to receive full credit

Study all of your notes, flipbook, homework, and quiz from Chapter 10 to be fully prepared

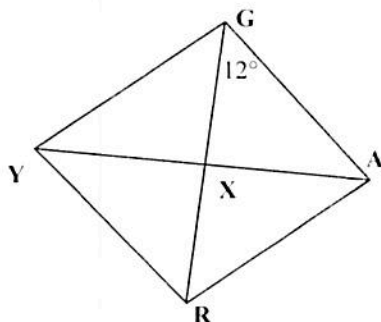
1. Practice Labeling the Quadrilateral FISD. You must label in order around the figure every time.



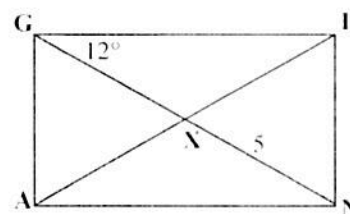
2. GARY is a rhombus. Find each.

3. GINA is a rectangle. Find each.

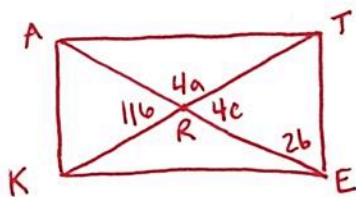
- A) $\angle YGA$ 24°
B) $\angle RXY$ 90°
C) $\angle RAY$ 78°



- A) XA 5
B) $\angle GNI$ 78°
C) $\angle NAI$ 12°

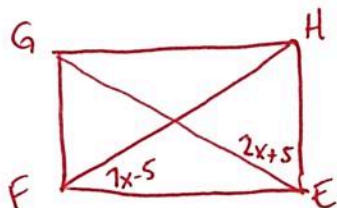


4. KATE is a rectangle whose diagonals meet at R. If $m\angle KRA = 116^\circ$, $m\angle ERT = (4c)^\circ$, $m\angle RET = (2b)^\circ$, and $m\angle ART = (4a)^\circ$, find the values of a, b, and c.



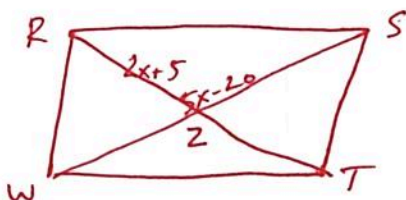
$$\begin{aligned} a &= 16 \\ b &= 16 \\ c &= 29 \end{aligned}$$

5. EFGH is a rectangle. If $m\angle HEG = (2x + 5)^\circ$ and $m\angle EFH = (7x - 5)^\circ$, find x and $m\angle FHG$.



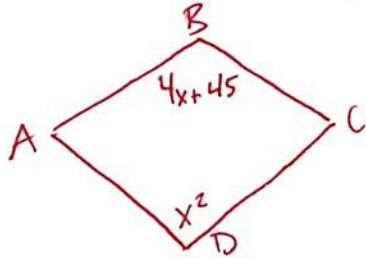
$$\begin{aligned} x &= 10 \\ \angle FHG &= 65^\circ \end{aligned}$$

6. RSTW is a rectangle whose diagonals intersect at Z. If $RZ = 2x + 5$ and $SW = 5x - 20$, find x and ZW.



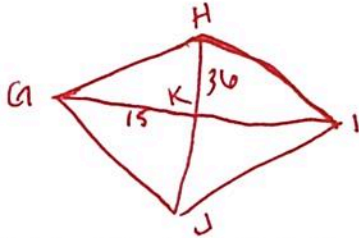
$$\begin{aligned} x &= 30 \\ ZW &= 65 \end{aligned}$$

7. ABCD is a rhombus. If $m\angle ABC = (4x + 45)^\circ$ and $m\angle ADC = (x^2)^\circ$, find x .



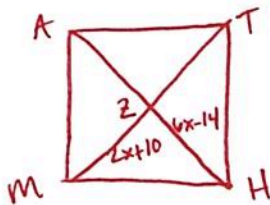
$$x = 9 \text{ or } -5$$

8. GHIJ is a rhombus whose diagonals intersect at K. If $GK = 15$ and $HK = 36$, find HI .



$$HI = 39$$

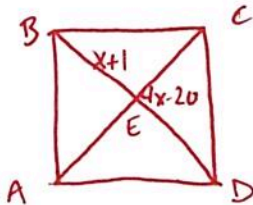
9. MATH is a square whose diagonals meet at Z. If $MZ = 2x + 10$ and $HZ = 6x - 14$, find HA .



$$x = 8$$

$$HA = 68$$

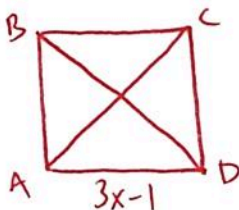
10. ABCD is a square with diagonals intersecting at E, and $BE = x + 1$ and $BD = 4x - 20$, find x and CE .



$$x = 11$$

$$CE = 24$$

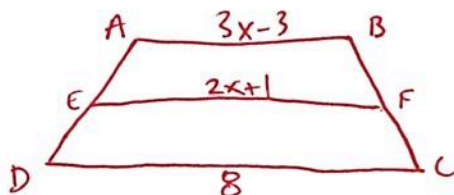
11. If ABCD is a square and $AD = 3x - 1$ and the perimeter is 140, find x , then find CD .



$$x = 12$$

$$CD = 35$$

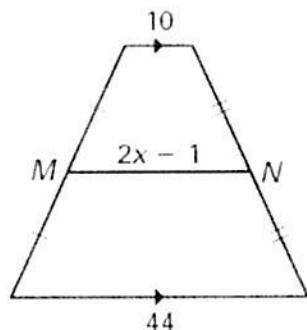
12. ABCD is a trapezoid with legs BC and AD. EF is the midsegment. If $AB = 3x - 3$, $EF = 2x + 1$, and $DC = 8$, find the value of x .



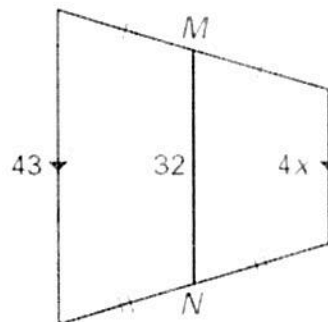
$$x = 3$$

13. Find the value of x .

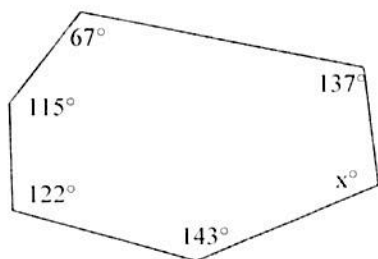
$$x = 14$$



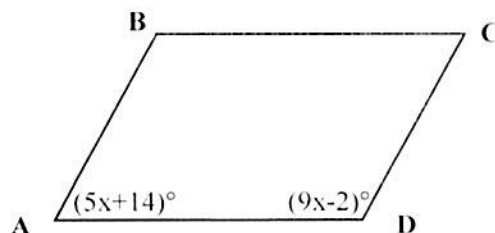
$$x = 5.25$$



14. Find x
 $x = 136$



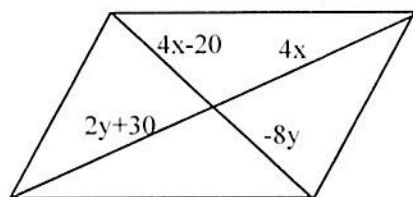
15. Find $m\angle B$ in parallelogram ABCD.



$$x = 12$$

$$\angle B = 106^\circ$$

16. Find x and y in the parallelogram.



$$x = 7$$

$$y = -1$$

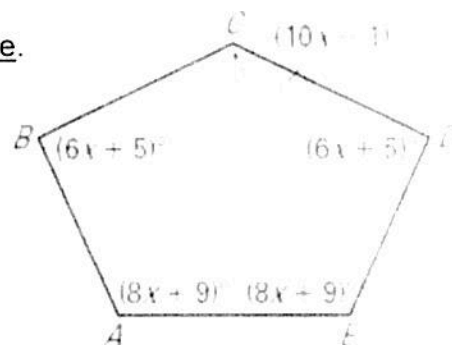
17. The side view of a light fixture is shown below.
Find the value of x , then determine the value of each angle.

$$x = 13.5$$

$$\angle A = 117^\circ \quad \angle D = 86^\circ$$

$$\angle B = 86^\circ \quad \angle E = 117^\circ$$

$$\angle C = 134^\circ$$



18. Find the numbered angles and the perimeter of the Kite

$$AC = 18 \quad BD = 52 \quad AD = 40$$

$$m\angle 1 = 33^\circ$$

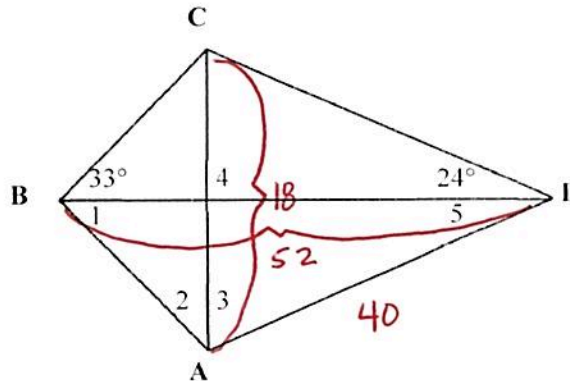
$$m\angle 2 = 57^\circ$$

$$m\angle 3 = 66^\circ$$

$$m\angle 4 = 90^\circ$$

$$m\angle 5 = 24^\circ$$

$$P = 98.4$$



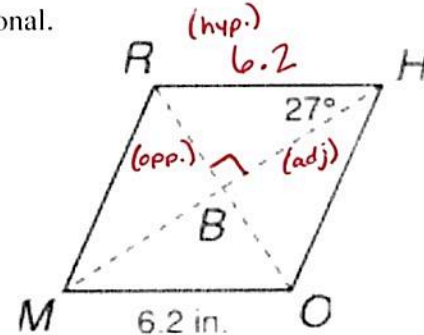
19. One Diagonal of a rhombus makes an angle of 27° with a side of the rhombus. If each side of the rhombus has a length of 6.2 inches, find the length of each diagonal.

$$\sin 27 = \frac{\text{opp}}{6.2}$$

$$RO = 5.63$$

$$\cos 27 = \frac{\text{adj}}{6.2}$$

$$MH = 11.05$$



20. List all the properties that apply to each quadrilateral. Properties may be used multiple times.

Parallelogram A C G J Q

Rhombus A C G J Q D L N

Rectangle A C G J Q H M

Square A C G J Q D H L M N

Kite R F K L O

Trapezoid B P

Isosceles Trapezoid B P E I M

- A. Both pairs opposite sides \parallel
- B. One pair of sides are \parallel
- C. Both pairs opposite sides \cong
- D. All sides \cong
- E. Non-parallel sides are \cong
- F. 1 pair opposite angles \cong
- G. Both pairs opposite angles \cong
- H. All angles \cong
- I. Base angles are \cong
- J. Diagonals bisect each other
- K. 1 diagonal bisects the other
- L. Diagonals are \perp
- M. Diagonals are \cong
- N. Diagonals bisect the angles
- O. 1 diagonal bisects the angles
- P. Same side interior angles supplementary
- Q. Consecutive angles are supplementary
- R. Consecutive sides are \cong