Question 1 RHOMBUS

$m\angle 1 = 90^\circ$ (angles at a perpendicular bisector)

$m\angle 2 = 180 - (90 + 61) = 29^\circ$

$m\angle 3 = 29^\circ$ $m\angle 3 = m\angle 2$

$m\angle 4 = 90^\circ$

$m\angle 5 = 29^\circ$ alternate $\angle$ with $m\angle 2$

$m\angle 6 = 29^\circ$ alternate with $m\angle 3$.

2. Rectangle

$m\angle 2 = 180^\circ - 112^\circ = 68^\circ$ (angles on a straight line)

$m\angle 1 = 90^\circ - 34^\circ = 56^\circ$

$m\angle 3 = 180 - (68 + 56)^\circ = 56^\circ$

$m\angle 4 = m\angle 2 = 68^\circ$

$m\angle 5 = 180^\circ - (112 + 34)^\circ = 34^\circ$

$m\angle 6 = 180^\circ - (90 + 56^\circ) = 34^\circ$

$m\angle 7 = 56^\circ$

3. Interior angle of Hexagon

The sum of angles $= 720^\circ$

each angle $= \frac{720^\circ}{6}$

$= 120^\circ$

4. Solve for y
IRRegular hexagon

The sum of interior angles $= 720^\circ$

$y^\circ + y^\circ + y^\circ + y^\circ + 90^\circ + 90^\circ = 720^\circ$

$4y^\circ + 180^\circ = 720^\circ$

$4y^\circ = 540^\circ$

$y = 540/4 = 135^\circ$

$y = 135^\circ$

5. Solve for x

$x^\circ + 3x^\circ + 3x^\circ + 2x^\circ + (3x - 12)^\circ = 360$

$9x + 3x - 12 = 360$

$12x^\circ = (360 - 12)^\circ$

$x = 348/12$

$= 29^\circ$

6. Solve for x

$y - 5 = 12$

$x + 2 = 4$

$x = 4 - 2$

$x = 2$

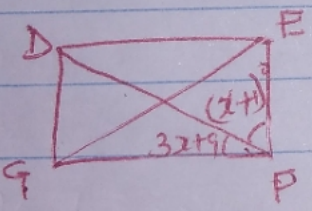
7. Solve for y

$(y - 60)^\circ = 56^\circ$

$y = (56 + 60)^\circ$

$y = 116^\circ$

8.



$(x+1)^\circ + (3x+9)^\circ = 90$

$4x + 10^\circ = 90^\circ$

$4x = 90^\circ - 10$

$4x = 80^\circ$

$x = 80^\circ / 4$

$x = 20^\circ$

9. $EFD = x + 1$

$= 20^\circ + 1$

$= 21^\circ$

9.

$m\angle APB = 2x + 48$

$APB = 180 - 90^\circ$

$= 90^\circ$

$2x + 48^\circ = 90^\circ$

$2x = 90^\circ - 48^\circ$

$2x = 42^\circ$

$x = 21^\circ$

10.

$(f + 30^\circ) = \dfrac{360^\circ - (2 \times 72)}{2}$

$f + 30^\circ = 108^\circ$

$f = 108^\circ - 30^\circ$

$f = 78^\circ$

11.

$x + 130^\circ + 75^\circ + 118^\circ + 105^\circ = 540^\circ$

$x + 428^\circ = 540^\circ$

$x = 540^\circ - 428^\circ$

$x = 112^\circ$

12. For a Rhombus

$AD = AB$

$4x + 4 = 10x - 26$

$4x - 10x = -26 - 4$

$\frac{-6x}{-6} = \frac{-30}{-6}$

$x = 5$

$DC = 10(5) - 26$

$= 50 - 26$

$= 24$

13. a Square — has 4 congruent sides

— has 4 congruent angles

14. $DA = 5x - 2$

$AB = 4x + 13$

$5x - 2 = 4x + 13$

$5x - 4x = 13 + 2$

$x = 15$

$AB = 4(15) + 13$

$= 60 + 13$

$= 73$

Perimeter $= 4l$

$= 4 \times 73$

$= 292$ units

15. Diagnols are equal

$AD = CB$

$2x - 3 = x + 13$

$2x - x = 13 + 3$

$x = 16$

$x = 16$

16.

$\angle BCD = 65^\circ$

$\angle BCD = \angle BAD$

$\angle BAC = \frac{65^\circ}{2}$

$= 32.5^\circ$

17.