

1. Rectangle COLD has vertices C (2, 2), O (10, 10), L (16, 4), and D (x, y). Solve for x and y.

$$\frac{10-2}{10-2} = 1$$

$$\frac{4-y}{16-x} = 1$$

$$\frac{2-y}{2-x} = -1$$

$$4-y = 16-x$$

$$-12+x = y$$

$$-12+x = 4-x$$

$$-16 = -2x$$

$$8 = x$$

$$2-y = -2+x$$

$$4-x = y$$

$$y = -4$$

(8, -4)

2. Given: FROS is a rectangle

$$FT = 4x$$

$$TO = 9x - 60$$

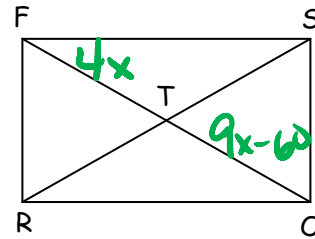
Find: RS

$$4x = 9x - 60$$

$$60 = 5x$$

$$12 = x$$

$$RS = 96$$



3. Given: CANE is a rectangle

$$AS = x^2$$

$$NS = 2x + 8$$

Find: CS

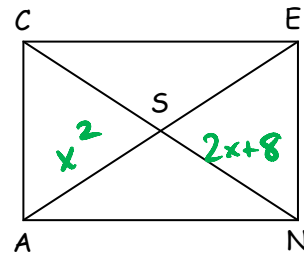
$$x^2 = 2x + 8$$

$$x^2 - 2x - 8 = 0$$

$$(x-4)(x+2)$$

$$x = 4, -2$$

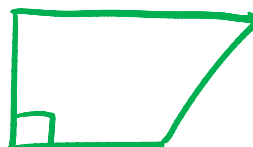
$$CS = 16 \text{ OR } 4$$



4. Is it true that "If two sides of a quadrilateral are perpendicular, then the quadrilateral is a rectangle?"

If not, draw a counter example.

NO!



5. Given: VIXE is a rectangle, $VI = y$
 $EX = x + 7$, $VE = y - 2x$, $IX = x + 1$
 Solve for x and y .

$$y = x + 7$$

$$x + 1 = y - 2x$$

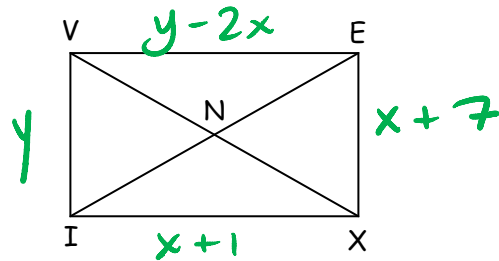
$$x = 3$$

$$y = 10$$

$$x + 1 = x + 7 - 2x$$

$$2x = 6$$

$$x = 3$$

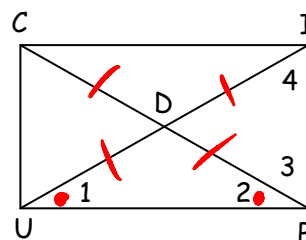


6. If CUPI is a rectangle and $m\angle 1 = 32^\circ$, find the $m\angle 2$, $m\angle 3$, $m\angle 4$.

$$m\angle 2 = 32^\circ$$

$$m\angle 3 = 58^\circ$$

$$m\angle 4 = 58^\circ$$



7. If RUDY is a rectangle and the measure of $\angle 2$ is three more than twice the measure of $\angle 1$, find the measure of the two angles.

$$x + y = 90$$

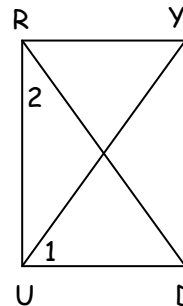
$$x = 2y + 3$$

$$2y + 3 + y = 90$$

$$3y + 3 = 90$$

$$m\angle 1 = 29^\circ$$

$$m\angle 2 = 61^\circ$$



8. The perimeter of rectangle SONG is 82.4 cm.
 Find SG and GN.

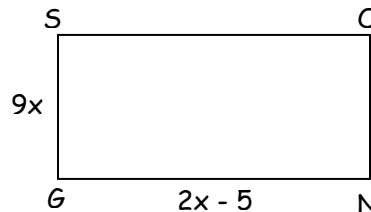
$$18x + 4x - 10 = 82.4$$

$$22x = 92.4$$

$$x = 4.2$$

$$SG = 37.8$$

$$GN = 3.4$$



9. If the area of the rectangle is 160 square meters,
 find the perimeter.

$$x(x + 6) = 160$$

$$x^2 + 6x - 160 = 0$$

$$(x + 16)(x - 10) = 0$$

$$x = -16, 10$$

$$\text{perimeter} = 52$$

