

24.  $x = \text{bicicletas}$   
 $y = \text{triciclos}$

$$\begin{cases} x+y=51 \\ 2x+3y=133 \end{cases} \rightarrow \begin{aligned} x &= 51-y \\ 2(51-y)+3y &= 133 \\ 102-2y+3y &= 133 \end{aligned}$$

**SUST**

$$y=31 \Rightarrow x=20$$

25.  $x = \text{edad}$   $15x+100 = x^2 \Rightarrow x^2-15x-100=0$   $\left\{ \begin{array}{l} x=20 \checkmark \\ x=-5 \end{array} \right.$

26.  $x \cdot (6-x) = 8 \Rightarrow 6x-x^2=8 \Rightarrow x^2-6x+8=0$   $\left\{ \begin{array}{l} x=4, 6-x=2 \\ x=2, 6-x=4 \end{array} \right.$   $8=4 \cdot 2$

27.  $3x^2+2x=85 \Rightarrow 3x^2+2x-85=0$

$$x = \frac{-2 \pm \sqrt{4-4 \cdot 3 \cdot (-85)}}{2 \cdot 3} = \frac{-2 \pm 32}{6} = \left\{ \begin{array}{l} x=5 \checkmark \\ x = \frac{-34}{6} = -\frac{17}{3} \checkmark \end{array} \right.$$

28.  $(2x+1)$  y  $(2x-1)$  son números impares consecutivos.

$$(2x+1)^2 + (2x-1)^2 = 394 \Rightarrow 4x^2+1+4x+4x^2+1-4x = 394 \Rightarrow$$

$$\Rightarrow 8x^2 = 392 \Rightarrow x^2 = 49 \Rightarrow x = \pm 7$$

- Si  $x=7$  los nros son 15 y 13
- Si  $x=-7$  " " " -13 y -15

29.  $x = \text{sacos de asno}$   
 $y = \text{sacos de mulo}$

$$\begin{cases} y+1 = 2(x-1) \\ y-1 = x+1 \end{cases} \rightarrow \begin{aligned} y &= 2x-3 \\ y &= x+2 \end{aligned}$$

**igual.**

$$2x-3 = x+2$$
 $x=5$   
 $y=7$

30.  $x = \text{nº desconocido}$

$$3x+40 = x^2 \Rightarrow x^2-3x-40=0$$
 $\left\{ \begin{array}{l} x=8 \checkmark \\ x=-5 \checkmark \end{array} \right.$

31. los nros son  $(x-1), x, (x+1) \Rightarrow (x-1)^2 + x^2 + (x+1)^2 = 365$

$$x^2-2x+1+x^2+x^2+2x+1 = 365$$

$$3x^2 = 363 \Rightarrow x^2 = 121 \Rightarrow x = \pm 11 \Rightarrow$$

$$\Rightarrow \text{los nros son } \boxed{-10, 11 \text{ y } 12 \text{ o } -10, -11 \text{ y } -12}$$

32.  $x = \text{edad actual de Mano.}$

$$(x+11) = \frac{(x-13)^2}{2} \Rightarrow 2x+22 = x^2-26x+169 \Rightarrow x^2-28x+147=0$$
 $\left\{ \begin{array}{l} x=21 \checkmark \\ x=7 \text{ imposible!!} \end{array} \right.$

33.  $x$  y  $x+2$  son los números.

$$x^2 + (x+2)^2 = 580 \Rightarrow x^2+x^2+4x+4 = 580 \Rightarrow 2x^2+4x-576=0 \Rightarrow$$

$$\Rightarrow x^2+2x-288=0$$
 $\left\{ \begin{array}{l} x=18 \\ x=16 \text{ y } x+2=18 \end{array} \right.$

34. los números son  $x$  y  $(5-x)$

$$x \cdot (5-x) = -84 \Rightarrow 5x-x^2 = -84 \Rightarrow x^2-5x-84=0$$
 $\left\{ \begin{array}{l} x=12, 5-x=-7 \\ x=-7, 5-x=12 \end{array} \right.$ 
 $12 \text{ y } -7$