1)

$$\left.\begin{array}{l} x \cdot y = 540 \\ (x+6)\cdot(y-3) = 540 \end{array}\right| \Rightarrow x = \frac{540}{y} \Rightarrow x = \frac{540}{18} = \boxed{30 = x}$$

$$\left(\frac{540}{y} + 6\right)\cdot(y-3) = 540$$

$$540y - \frac{1620}{y} + 6y - 18 = 540$$

$$\frac{540y}{y} - \frac{1620}{y} + \frac{6y^2}{y} - \frac{18y}{y} = \frac{540y}{y}$$

$$6y^2 - 18y - 1620 = 0$$

$$y = \frac{18 \pm \sqrt{(-18)^2 - 4\cdot 6\cdot(-1620)}}{2\cdot 6} = \frac{18 \pm \sqrt{324 + 38880}}{12} = \frac{18 \pm \sqrt{39204}}{12}$$

$$= \frac{18 \pm 198}{12} = \begin{cases} x_1 = 18 \\ x_2 = -15 \end{cases}$$

Numero de estudiantes es de 30.

El precio es de 18 €