

①

$$x \cdot y = 540 \text{€} \quad \left| \quad x = \frac{540}{y} \rightarrow \frac{540}{18} = 30 \right.$$

$$(x+6) \cdot (y-3) = 540 \text{€} \quad \left| \quad \left(\frac{540}{y} + 6\right) \cdot (y-3) = 540 \right.$$

$$\frac{540y}{y} + 6y - \frac{540 \cdot 3}{y} - 18 = 540$$

$$540y + 6y^2 - 120 - 18y = 540y$$

$$540y + 6y^2 - 120 - 18y - 540y = 0$$

$$\frac{6y^2 - 18y - 120}{6} \rightarrow y^2 - 3y - 20 = 0$$

$$\frac{3 \pm \sqrt{3^2 - 4 \cdot (-20)}}{2} = \frac{3 \pm \sqrt{109}}{2} = \frac{3+33}{2} = \frac{36}{2} = \boxed{18}$$

$$\frac{3-33}{2} = \frac{-30}{2} = \boxed{-15}$$

