

## Ejercicios 1.1

27.

$$m = \frac{dy}{dx} = x + y$$

$$\int dy = \int x + y \, dx$$

$$y = \frac{x^2}{2} + yx + C$$

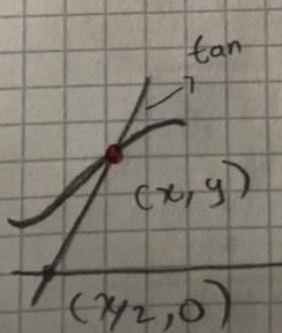
$$y - yx = \frac{x^2}{2}$$

$$y(1-x) = \frac{x^2}{2}$$

$$y = \frac{x^2}{2-2x} + C$$

28.

$$m = \frac{dy}{dx} = \frac{y - y_1}{x - x_1} = \frac{y - 0}{x - \frac{x}{2}} = \frac{2y}{x}$$



$$\frac{y - 0}{x - \frac{x}{2}} = \frac{y}{\frac{x}{2}} = \frac{2y}{x}$$

29.  $\frac{dy}{dx} = \frac{y-1}{x-0} = \frac{y-1}{x}$

$$m_2 = \frac{-x}{(y-1)} = \frac{-x}{-(1-y)} = \frac{x}{1-y} = \frac{dy}{dx}$$

$$\int (1-y) dy = \int x dx$$

$$\int dy - \int y dy = \int x dx$$

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

$$\frac{x^2}{2} + \frac{y^2}{2} = y \rightarrow x^2 + y^2 = 2y$$

30.  $y = x^2 + k$

$$m_1 \cdot m_2 = -1$$

$$m_2 = \frac{-1}{m_1}$$

$$\frac{dy}{dx} = 2x$$

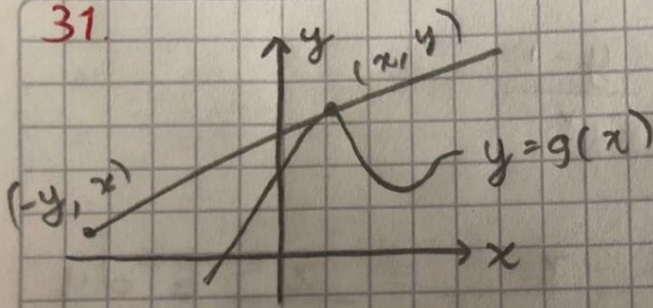
$$\frac{dy}{dx} = \frac{-1}{2x}$$

$$\int dy = \int -\frac{1}{2x} dx$$

$$\int 1 dy = \int -\frac{1}{2} \cdot \frac{1}{x} dx$$

$$y = -\frac{1}{2} \ln x + c$$

31.



$$\frac{dy}{dx} = \frac{y-x}{x+y}$$