Write an equation of the line that passes through the given points: (2,8) and (8,3)

Solution:
Equation of a line from 2 points

$$y - y_1 = \frac{y_2 - y_1}{x_2 - x_1}(x - x_1)$$

So for the points (2,8) and (8,3) we have

$$y - 8 = \frac{3 - 8}{8 - 2}(x - 2)$$

$$y = -\frac{5}{6}(x - 2) + 8$$

$$y = -\frac{5}{6}x + 9\frac{2}{3}$$

Answer: $y = -\frac{5}{6}x + 9\frac{2}{3}$