

Nombre del alumno: \_ Carlos Daniel Jiménez Velázquez

Profesor: \_ Jorge Sebastián Domínguez torres

Materia: \_ matemáticas aplicada

DETERMINA EL AREA / INTEGRAL DEFINIDA.

$F(x) = x^2 - 4x - 5$

①

$$\int_{-1}^5 (x^2 - 4x - 5) dx$$
$$\left[ \frac{x^3}{3} - 2x^2 - 5x \right]_{-1}^5$$
$$\left| \frac{(5)^3}{3} - 2(5)^2 - 5(5) - \left( \frac{(-1)^3}{3} - 2(-1)^2 - 5(-1) \right) \right|$$
$$\frac{125}{3} - 50 - 25 - \left( -\frac{1}{3} - 2 + 5 \right)$$
$$\frac{125}{3} - \frac{225}{3} + \frac{1}{3} + \frac{6}{3} - \frac{25}{3} \Rightarrow \frac{108}{3} \Rightarrow \textcircled{36}$$

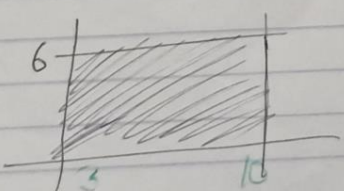
②

$F(x) = -x + 2$

$$\int_{-4}^5 \left( \frac{-x^2}{2} + 2x \right)$$
$$\left| \frac{-5^2}{2} + 2(5) - \left( \frac{-4^2}{2} + 2(-4) \right) \right|$$
$$-\frac{25}{2} + \frac{20}{2} + \frac{16}{2} + \frac{16}{2}$$
$$-\frac{5}{2} + \frac{32}{2} \Rightarrow \frac{27}{2} \Rightarrow \boxed{13.5}$$

③

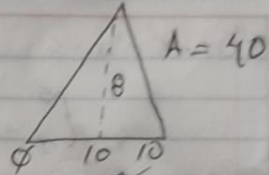
$F(x) = 6$   
 $x = 6$


$$\int_3^{10} 6x$$
$$60 - 18x \Rightarrow 42 \quad A = 42$$

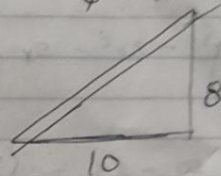
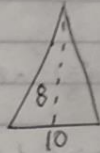
DETERMINAZIONE DI ANCHE / INTEGRALI DEFINITI

$$f(x) = \frac{8x}{10}$$

$$M = \frac{dy}{dx} \quad M = \frac{11}{6}$$



$$\int_0^{10} \frac{8x^2}{10} \Rightarrow \frac{8x^2}{20}$$



$$\int_0^{10} \frac{2x^2}{5} \Rightarrow \frac{2(10)^2}{5} \Rightarrow \frac{2(100)}{5} = \frac{200}{5}$$

$$A = 40$$