

Soluções

Ficha 2-B

Primitivas imediatas

1. a) $5k^2 \frac{x^7}{7} + C;$

b) $\frac{3x^{5/3}}{5} + \frac{7x^2}{2} + 8x + C;$

c) $-\frac{1}{4x^4} - 4\sqrt{x} + C;$

d) $\frac{x^2}{2} - \frac{6}{\sqrt{x}} - \frac{4}{x} + C;$

e) $\frac{2}{3}\ln|3x - 5| + C;$

f) $\frac{1}{3}(2x + 3)^{3/2} + C.$

2. a) $-e^{\cos^2(x)} + C;$

b) $\frac{2a}{a-x} + C;$

c) $\arcsen(e^x) + C;$

d) $\ln(\sqrt{x^2 + 1}) - \arctg(x) + C;$

e) $\frac{1}{2}\operatorname{argch}\left(\frac{x^2}{2}\right) + C;$

f) $-\frac{\operatorname{sen}^{-2}(7x)}{14} + C;$

g) $-\frac{1}{3}(4 - x^2)^{3/2} + C;$

h) $\frac{2}{3}\sqrt{x^3 + 3x^2 - 4} + C;$

i) $\frac{1}{15}(x^3 + e)^5 + C;$

j) $\frac{x}{2} - \frac{\operatorname{sen}(8x)}{16} + C.$

3. $t = 4$ segundos; $s = 40$ metros.