

PRIMITIVES

Série 2

Automatismes en BTS – IREM de Clermont-Ferrand

Donner une primitive de la
fonction donnée sur l'intervalle
 I précisé.

Question 1/8

$$f(x) = \frac{5e^x}{2} + \frac{2}{x^2}$$
$$I =]0 ; +\infty[$$

Question 2/8

$$f(x) = x^3 - 3x^2 + 6x - 9$$

$$I = \mathbb{R}$$

Question 3/8

$$f(x) = e^{2x} + \frac{3x}{2}$$

$$I = \mathbb{R}$$

Question 4/8

$$f(x) = \cos(3x) + \frac{1}{2x}$$

$$I =]0; +\infty[$$

Question 5/8

$$f(x) = \sin(2x) - \frac{1}{x+2}$$
$$I =]0; +\infty[$$

Question 6/8

$$f(x) = e^{x-1} + \frac{1}{(x-3)^2}$$

$$I =]3; +\infty[$$

Question 7/8

$$f(x) = 3e^{3x+2} + 2 \cos(3x - 1)$$

$$I = \mathbb{R}$$

Question 8/8

$$f(x) = \frac{2}{2x - 1} - \sin(4x - 1)$$
$$I = [1 ; +\infty[$$

CORRIGÉS

Donner une primitive de la
fonction donnée.

Question 1/8

$$f(x) = \frac{5e^x}{2} + \frac{2}{x^2}$$

$$I =]0 ; +\infty[$$

Question 1/8

$$f(x) = \frac{5e^x}{2} + \frac{2}{x^2}$$

$$I =]0 ; +\infty[$$

$$F(x) = \frac{5e^x}{2} - \frac{2}{x}$$

Question 2/8

$$f(x) = x^3 - 3x^2 + 6x - 9$$

$$I = \mathbb{R}$$

Question 2/8

$$f(x) = x^3 - 3x^2 + 6x - 9$$

$$I = \mathbb{R}$$

$$F(x) = \frac{x^4}{4} - x^3 + 3x^2 - 9x$$

Question 3/8

$$f(x) = e^{2x} + \frac{3x}{2}$$

$$I = \mathbb{R}$$

Question 3/8

$$f(x) = e^{2x} + \frac{3x}{2}$$

$$I = \mathbb{R}$$

$$F(x) = \frac{e^{2x}}{2} + \frac{3x^2}{4}$$

Question 4/8

$$f(x) = \cos(3x) + \frac{1}{2x}$$

$$I =]0; +\infty[$$

Question 4/8

$$f(x) = \cos(3x) + \frac{1}{2x}$$

$$I =]0; +\infty[$$

$$F(x) = \frac{\sin(3x)}{3} + \frac{1}{2} \ln(x)$$

Question 5/8

$$f(x) = \sin(2x) - \frac{1}{x+2}$$
$$I =]0; +\infty[$$

Question 5/8

$$f(x) = \sin(2x) - \frac{1}{x+2}$$

$$I =]0; +\infty[$$

$$F(x) = -\frac{\cos(2x)}{2} - \ln(x+2)$$

Question 6/8

$$f(x) = e^{x-1} + \frac{1}{(x-3)^2}$$

$$I =]3; +\infty[$$

Question 6/8

$$f(x) = e^{x-1} + \frac{1}{(x-3)^2}$$

$$I =]3; +\infty[$$

$$F(x) = e^{x-1} - \frac{1}{x-3}$$

Question 7/8

$$f(x) = 3e^{3x+2} + 2 \cos(3x - 1)$$

$$I = \mathbb{R}$$

Question 7/8

$$f(x) = 3e^{3x+2} + 2 \cos(3x - 1)$$

$$I = \mathbb{R}$$

$$F(x) = e^{3x+2} + \frac{2}{3} \sin(3x - 1)$$

Question 8/8

$$f(x) = \frac{2}{2x - 1} - \sin(4x - 1)$$
$$I = [1 ; +\infty[$$

Question 8/8

$$f(x) = \frac{2}{2x - 1} - \sin(4x - 1)$$

$$I = [1 ; +\infty[$$

$$F(x) = \ln(2x - 1) + \frac{1}{4} \cos(4x - 1)$$