

EXERCICES PRIMITIVES DE FONCTIONS

Site Pédagogique de Adama Traoré Lycée Technique Bamako

EXERCICE 01 :

Trouver une primitive F de chacune des fonctions f définies par

$$1^{\circ}) f(x) = -x^3 + 6x^2 + 10x - 4$$

$$2^{\circ}) f(x) = 2x^5 - 5x^3 + 5x$$

$$3^{\circ}) f(x) = 3x^4 - 4x^3 + 5x^2 - 9x + 1$$

$$4^{\circ}) f(x) = -3x^4 + 2x^3 - 5x + 7$$

$$5^{\circ}) f(x) = (2x - 1)(x^2 - x + 4)^3$$

$$6^{\circ}) f(x) = (6x+3)(x^2 + x + 1)^4$$

$$7^{\circ}) f(x) = 5x(x^2 + x + 1)^6$$

$$8^{\circ}) f(x) = 3x^2(x^3 + 1)^5$$

$$9^{\circ}) f(x) = 7x^2(x^3 + 5)^3$$

$$10^{\circ}) f(x) = x(x^2 - 4)^2$$

$$11^{\circ}) f(x) = (5x + 1)^7$$

$$12^{\circ}) f(x) = (-3x+2)^4$$

$$13^{\circ}) f(x) = (x - 4)^3$$

$$14^{\circ}) f(x) = (5 - 2x)^6$$

$$15^{\circ}) f(x) = \frac{2x+1}{(x^2 + x - 3)^3}$$

$$16^{\circ}) f(x) = \frac{3}{(5x-1)^2}$$

$$17^{\circ}) \frac{2x}{(x^2 + 1)^4}$$

$$18^{\circ}) f(x) = \frac{-x}{(x^2 - 9)^5}$$

$$19^{\circ}) f(x) = \frac{x}{(x^2 + 2)^3}$$

$$20^{\circ}) f(x) = 5 + x + \frac{4}{(x+1)^2}$$

$$21^{\circ}) f(x) = \frac{3x}{(x^2 + 2)^3}$$

$$22^{\circ}) f(x) = -x^2 + \frac{4}{x^2} + \frac{5}{x^3} + \frac{2}{(x+3)^2}$$

$$23^{\circ}) f(x) = \frac{2x^5 - x^3 + 3x^2 + 2}{x^2}$$

$$24^{\circ}) f(x) = \frac{x^3 + 5x^2 - 1}{3x^2}$$

$$25^{\circ}) f(x) = \frac{2x^3 + 5x^2 + 4x + 4}{(x+1)^2}$$

$$26^{\circ}) f(x) = (x^3 - 7x + 1)^5 (3x^2 - 7)$$

$$27^{\circ}) f(x) = \frac{\cos x}{\sin^3 x}$$

$$28^{\circ}) f(x) = \sin x \cos^4 x$$

$$29^{\circ}) f(x) = \frac{\sin x}{\cos^4 x}$$

$$30^{\circ}) f(x) = \cos x \sin^4 x$$

$$31^{\circ}) f(x) = \sin 3x$$

$$32^{\circ}) f(x) = \sin(4x + \frac{\pi}{3})$$

$$33^{\circ}) f(x) = 4 \cos 2x$$

$$34^{\circ}) f(x) = \cos(6x + 2)$$

$$35^{\circ}) f(x) = \cos 3x + 6 \sin 3x - \sin x \cos^3 x$$

$$36^{\circ})$$

$$f(x) = 10 \sin 5x + 12 \cos 4x - 3 \sin(6x - \frac{\pi}{6})$$

$$37^{\circ}) f(x) = \cos^5 x$$

$$38^{\circ}) f(x) = \sin^4 x.$$

EXERCICE 02:

Déterminer une primitive F de chacune des fonctions f suivantes

$$f(x) = (x^4 - 5x^2 + 3)$$

$$f(x) = (x+3)(x^2 + 6x + 4)^2$$

$$f(x) = \frac{4x^3 - 3x^2 + 1}{5x^2}$$

$$f(x) = (2x+1)^3$$

$$f(x) = \frac{3x+6}{(x^2 + 4x + 3)^4}$$

$$f(x) = \frac{3}{(3-2x)^4}$$

$$f(x) = (3x^2 - \frac{4}{x^2} + \sqrt{x})$$

$$f(x) = \frac{\cos x}{\sin^2 x}$$

$$f(x) = \sin x \cos^3 x$$

$$f(x) = x(x^2 + 1)^5$$

$$f(x) = \sqrt{x+3}$$

$$f(x) = \cos\left(2x + \frac{\pi}{3}\right)$$

$$f(x) = x(x^2 - 3)$$

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

$$f(x) = \frac{10x+1}{5x^2 + x + 3}$$

$$f(x) = \cos x(1 - 3\sin^2 x)$$

$$f(x) = (x+3)(x^2 + 6x + 4)^2$$

$$f(x) = x\sqrt{-x+3}$$

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

$$f(x) = (3x+2)^3$$

