

Nom & Prénom :

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Donner les primitives des fonctions suivantes :

Réponses :

1) $f(x) = 5x^2 - 6x + 7$
 $F(x) = \dots\dots\dots$

1) $f(x) = 5x^2 - 6x + 7$
 $F(x) = \frac{5x^3}{3} - 6\frac{x^2}{2} + 7x + c = \frac{5x^3}{3} - 3x^2 + 7x + c$

2) $f(x) = \cos(5x+6)$
 $F(x) = \dots\dots\dots$

2) $f(x) = \cos(5x+6)$ $F(x) = \frac{\sin(5x+6)}{5} + c$

3) $f(x) = \frac{1}{x^2} + \frac{1}{\sqrt{x}}$
 $F(x) = \dots\dots\dots$

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

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

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

5) $f(x) = \frac{6x+7}{(3x^2+7x+4)^8}$
 $F(x) = \dots\dots\dots$

5) $f(x) = \frac{6x+7}{(3x^2+7x+4)^8}$ $F(x) = \frac{-1}{7(3x^2+7x+4)^7} + c$

6) $f(x) = \frac{\cos(x+4)}{\sin(x+4)}$
 $F(x) = \dots\dots\dots$

6) $f(x) = \frac{\cos(x+4)}{\sin(x+4)}$ $F(x) = \ln(\sin(x+4)) + c$

7) $f(x) = 2(2x - 9)^{14}$
 $F(x) = \dots\dots\dots$

7) $f(x) = 2(2x - 9)^{14}$ $F(x) = \frac{(2x-9)^{15}}{15} + c$

8) $f(x) = \frac{x+1}{\sqrt{x^2+2x+9}}$
 $F(x) = \dots\dots\dots$

8) $f(x) = \frac{x+1}{\sqrt{x^2+2x+9}}$
 $F(x) = \frac{1}{2} 2\sqrt{x^2+2x+9} + c = \sqrt{x^2+2x+9} + c$

9) $f(x) = (9x^2 + 6)(x^3 + 2x - 4)^5$
 $F(x) = \dots\dots\dots$

9) $f(x) = (9x^2 + 6)(x^3 + 2x - 4)^5$
 $F(x) = 3 \times \frac{(x^3+2x-4)^6}{6} + c = \frac{(x^3+2x-4)^6}{2} + c$

10) $f(x) = \frac{5}{x} (\ln(x))^3$
 $F(x) = \dots\dots\dots$

10) $f(x) = \frac{5}{x} (\ln(x))^3$ $F(x) = 5 \times \frac{(\ln(x))^4}{4} + c$