CONTROLE N°5 . DUREE 30 MN LE 09/11/18. SB

Calculer les dérivées des fonctions suivantes :

Df= [1 ;18] $f(x) = 5x^7 + \frac{3}{x^2} - \frac{\sqrt{2}}{x^3}$	Df= [1 ;18] $f(x) = 35x^6 - \frac{6}{x^3} + \frac{3\sqrt{2}}{x^4}$
$f(x) = (3x + 1)(x^5 + 2x^2)$	$f'(x) = 18x^5 + 5x^4 + 18x^2 + 4x$
$f(x) = (-6x^3 + x^2 - x)^2$	$f'(x) = 2(-18x^2 + 2x - 1)(-6x^3 + x^2 - x)$
$f(x) = \sin(5x^2 + 2)$	$f'(x) = 10x \cos(5x^2 + 2)$
$f(x) = \frac{1}{(x^6 + x^4 + 10)^4}$	$f'(x) = -\frac{4(6x^5 + 4x^3)}{(x^6 + x^4 + 10)^5}$
$f(x) = \frac{2x + 5}{4x^2 + 3}$	$f'(x) = \frac{-8x^2 - 40x + 6}{(x^2 + 1)^2}$
Df = R $f(x) = \sqrt{9x^2 + 3x + 2}$	$f'(x) = \frac{18x+3}{2\sqrt{9x^2 + 3x + 2}}$