微分ミニテスト　ID:201807162246

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2年 ____ 科____ 番 氏名 _____

★ 次の関数を微分せよ。

(1) $f(x) = \dfrac{3x-2}{4x^2-12x+9}$

(2) $f(x) = \dfrac{1}{2x^2+x+5}$

(3) $f(x) = \dfrac{1}{\sqrt[3]{x^4}}$

(4) $f(x) = \sqrt[5]{x^4}$

(5) $f(x) = \dfrac{1}{(x^2+2x)^4}$

(6) $f(x) = (3x^2+7x+2)^5$

(7) $f(x) = \sin(x^2-4x+6)$

(8) $f(x) = \tan(9x^2-9x+2)$

(9) $f(x) = \cos^3(x+1)$

(10) $f(x) = \sin^4(2x-1)$

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(1) $f'(x) = \dfrac{-12x^2+16x+3}{(4x^2-12x+9)^2} = \dfrac{-6x-1}{(2x-3)^3}$

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

(3) $f'(x) = -\dfrac{4}{3x^{\frac{7}{3}}}$

(4) $f'(x) = \dfrac{4}{5\sqrt[5]{x}}$

(5) $f'(x) = \dfrac{-8x-8}{(x^2+2x)^5}$

(6) $f'(x) = (30x+35)\left(3x^2+7x+2\right)^4$

(7) $f'(x) = (2x-4)\cos\left(x^2-4x+6\right)$

(8) $f'(x) = \dfrac{18x-9}{\cos^2(9x^2-9x+2)}$

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

(10) $f'(x) = 8\cos(2x-1)\sin^3(2x-1)$