Kontrolltöö 4 kordamisülesanded

Leia funktsiooni tuletis   Vastus:

1) $f(x) = -4x^7 + 2x + 6$	$f'(x) = -28x^6 + 2$
2) $g(s) = 2s^{15} + 3s^6 - 6s + 7$, $g'(-1) = ?$	$g'(s) = 30s^{14} + 18s^5 - 6$, $g'(-1) = 6$
3) $y(x) = \dfrac{34}{x^5} + 56^x - \dfrac{78\sin x}{11}$	$y'(x) = -\dfrac{170}{x^6} + 56^x \ln 56 - \dfrac{78}{11}\cos x$
4) $q(t) = \dfrac{5\sqrt[7]{t^2}}{12} - \dfrac{e^t}{4} + 81\arccos t$	$q'(t) = \dfrac{5}{42\sqrt[7]{t^5}} - \dfrac{e^t}{4} - \dfrac{81}{\sqrt{1-t^2}}$
5) $r(u) = 15\sqrt[5]{u^2} + 22\log_3 u - \sqrt{13}$	$r'(u) = \dfrac{6}{\sqrt[5]{u^3}} + \dfrac{22}{u\ln 3}$
6) $s(v) = \dfrac{\ln v}{2} - 2\cos v + \dfrac{v}{4}$	$s'(v) = \dfrac{1}{2v} + 2\sin v + \dfrac{1}{4}$
7) $b(m) = \dfrac{1 - \ln m}{1 + \ln m}$	$\dfrac{-\dfrac{2}{m}}{\left(1+\ln m\right)^2} = -\dfrac{2}{m\left(1+\ln m\right)^2}$
8) $g(n) = \dfrac{4n^2 + n^4}{5 - 3n^3}$	$g'(n) = \dfrac{-3n^6 + 12n^4 + 20n^3 + 40n}{\left(5 - 3n^3\right)^2}$
9) $k(p) = \left(3p^2 - 10\right)\ln p$	$6p\ln p + \dfrac{3p^2}{p} - \dfrac{10}{p} = 6p\ln p + 3p - \dfrac{10}{p}$
10) $y(x) = \left(2e^x - 1\right)\sin x$	$y'(x) = 2e^x \sin x + \cos x\left(2e^x - 1\right)$