

1. Obliczyć pochodne funkcji:

(a) $y = 3x^2 + 2x - 5$,

(b) $y = \frac{x^2-2}{3x+4}$,

(c) $y = \frac{2x^3-5x+7}{x}$,

(d) $y = (1 - x^2)^{20}$,

(e) $y = \operatorname{tg} \frac{x+1}{2}$,

(f) $y = (3x^5 + 2x^3 - 5x + 9)(x^3 - 4x)$,

(g) $y = \sin(3x + 7)$,

(h) $y = \ln^2 x$,

(i) $y = \sqrt{\ln x}$,

(j) $y = \cos^2 4x$,

(k) $y = \frac{\arcsin x}{\sqrt{1-x^2}}$,

(l) $y = e^x \cdot \ln x$,

(m) $y = \sin x \cdot e^{\cos x}$,

(n) $y = (\arcsin x)^2$,

(o) $y = \sqrt{1 + 2 \operatorname{tg} x}$,

(p) $y = \ln(1 + \cos x)$,

(q) $y = (1 + \sqrt{x})(1 + \sqrt{3x})$,

(r) $y = 2^{\frac{x}{\ln x}}$,

(s) $y = x \arcsin x + \sqrt{1 - x^2}$,

(t) $y = \ln \sin(3x^2 + 5x)$,

(u) $y = \ln \operatorname{tg} \sqrt{1 + x^2}$,

(v) $y = \ln \frac{1+x}{1-x}$,

(w) $y = \sin(\arcsin(4x))$,

(x) $y = \frac{1}{\sqrt{1-x^4-x^8}}$,

(y) $y = e^{3x+1} \cdot \ln x^2$,

(z) $y = (\sqrt[3]{x} + 2x)(1 + \sqrt[3]{x^2} + 3)$.