

**Тренажер по производным. Найдите производную сложной функции**

Вариант 1	Вариант 2	Вариант 3	Вариант 4	Вариант 5
1) $y = (6x + 7)^9$	1) $y = (2x + 5)^4$	1) $y = (14x + 2)^6$	1) $y = (4x + 3)^3$	1) $y = (4x + 3)^5$
2) $y = (5 - 4x^2 + 9x)^3$	2) $y = (6 - 3x^2 + 5x)^6$	2) $y = (17 - 5x^2 + 6x)^4$	2) $y = (5 - 9x^2 + 8x)^5$	2) $y = (7 - 6x^2 + 2x)^4$
3) $y = 8(3x - 2)^4$	3) $y = 5(6x - 8)^5$	3) $y = 16(2x - 7)^3$	3) $y = 4(3x - 5)^2$	3) $y = 3(8x - 1)^3$
4) $y = \frac{1}{(2x + 4)^5}$	4) $y = \frac{1}{(4x + 6)^3}$	4) $y = \frac{1}{(9x + 1)^4}$	4) $y = \frac{1}{(6x + 2)^2}$	4) $y = \frac{1}{(7x + 2)^4}$
5) $y = \frac{4}{(3 - 7x)^5}$	5) $y = \frac{6}{(5 - 3x)^7}$	5) $y = \frac{3}{(3 - 4x)^6}$	5) $y = \frac{17}{(10 - 2x)^4}$	5) $y = \frac{3}{(8 - 5x)^6}$
6) $y = 6\sqrt{5x + 3}$	6) $y = 8\sqrt{3x + 4}$	6) $y = 2\sqrt{7x + 11}$	6) $y = 11\sqrt{3x + 9}$	6) $y = 3\sqrt{4x + 9}$
7) $y = \sqrt{\frac{x}{9} - 14}$	7) $y = \sqrt{\frac{x}{2} - 10}$	7) $y = \sqrt{\frac{x}{2} - 3}$	7) $y = \sqrt{\frac{x}{4} - 1}$	7) $y = \sqrt{\frac{x}{3} - 13}$
8) $y = \sin\left(8x - \frac{\pi}{2}\right)$	8) $y = \sin\left(4x - \frac{\pi}{5}\right)$	8) $y = \sin\left(6x - \frac{\pi}{4}\right)$	8) $y = \sin\left(8x - \frac{\pi}{2}\right)$	8) $y = \sin\left(7x - \frac{\pi}{4}\right)$
9) $y = 6 \cos(7x + \pi)$	9) $y = 9 \cos(5x + \pi)$	9) $y = 6 \cos(2x + \pi)$	9) $y = 4 \cos(4x + 2\pi)$	9) $y = 2 \cos(3x + \pi)$
10) $y = \operatorname{tg}\left(4x - \frac{\pi}{3}\right)$	10) $y = \operatorname{tg}\left(2x - \frac{\pi}{6}\right)$	10) $y = \operatorname{tg}\left(9x - \frac{\pi}{3}\right)$	10) $y = \operatorname{tg}\left(8x - \frac{\pi}{9}\right)$	10) $y = \operatorname{tg}\left(5x - \frac{\pi}{3}\right)$
11) $y = 2 \operatorname{ctg}\left(\frac{x}{5} + \frac{\pi}{4}\right)$	11) $y = 5 \operatorname{ctg}\left(\frac{x}{4} + \frac{\pi}{2}\right)$	11) $y = 7 \operatorname{ctg}\left(\frac{x}{5} + \frac{\pi}{2}\right)$	11) $y = 2 \operatorname{ctg}\left(\frac{x}{7} + \frac{\pi}{3}\right)$	11) $y = 6 \operatorname{ctg}\left(\frac{x}{3} + \frac{\pi}{2}\right)$
12) $y = 6 \sin^3\left(8x + \frac{\pi}{5}\right)$	12) $y = 7 \sin^3\left(5x + \frac{\pi}{4}\right)$	12) $y = 3 \sin^2\left(4x + \frac{\pi}{6}\right)$	12) $y = 4 \sin^4\left(5x + \frac{\pi}{6}\right)$	12) $y = 4 \sin^2\left(2x + \frac{\pi}{6}\right)$

Вариант 6	Вариант 7	Вариант 8	Вариант 9	Вариант 10
1) $y = (5x + 6)^4$	1) $y = (5x + 2)^4$	1) $y = (3x + 4)^3$	1) $y = (7x + 1)^8$	1) $y = (2x + 13)^5$
2) $y = (2 - 7x^2 + 3x)^3$	2) $y = (3 - 6x^2 + 4x)^6$	2) $y = (8 - 5x^2 + 4x)^5$	2) $y = (1 - 3x^2 + 4x)^5$	2) $y = (11 - 5x^2 + 4x)^2$
3) $y = 4(2x - 9)^2$	3) $y = 6(5x - 4)^5$	3) $y = 2(4x - 3)^2$	3) $y = 7(5x - 4)^6$	3) $y = 11(3x - 9)^4$
4) $y = \frac{1}{(3x + 5)^3}$	4) $y = \frac{1}{(3x + 7)^3}$	4) $y = \frac{1}{(5x + 3)^2}$	4) $y = \frac{1}{(6x + 2)^5}$	4) $y = \frac{1}{(4x + 6)^3}$
5) $y = \frac{5}{(6 - 4x)^5}$	5) $y = \frac{16}{(3 - 5x)^7}$	5) $y = \frac{5}{(7 - 6x)^4}$	5) $y = \frac{14}{(4 - 5x)^5}$	5) $y = \frac{5}{(10 - 5x)^6}$
6) $y = 2\sqrt{6x + 2}$	6) $y = 3\sqrt{4x + 8}$	6) $y = 4\sqrt{2x + 7}$	6) $y = 3\sqrt{4x + 6}$	6) $y = 8\sqrt{15x + 3}$
7) $y = \sqrt{\frac{x}{4} - 12}$	7) $y = \sqrt{\frac{x}{3} - 9}$	7) $y = \sqrt{\frac{x}{5} - 11}$	7) $y = \sqrt{\frac{x}{6} - 9}$	7) $y = \sqrt{\frac{x}{8} - 16}$
8) $y = \sin\left(6x - \frac{\pi}{3}\right)$	8) $y = \sin\left(7x - \frac{\pi}{6}\right)$	8) $y = \sin\left(5x - \frac{\pi}{6}\right)$	8) $y = \sin\left(5x - \frac{\pi}{3}\right)$	8) $y = \sin\left(9x - \frac{\pi}{3}\right)$
9) $y = 4\cos(2x + \pi)$	9) $y = 8\cos(5x + \pi)$	9) $y = 3\cos(4x + 2\pi)$	9) $y = 2\cos(3x + \pi)$	9) $y = 7\cos(5x + \pi)$
10) $y = \operatorname{tg}\left(3x - \frac{\pi}{4}\right)$	10) $y = \operatorname{tg}\left(5x - \frac{\pi}{6}\right)$	10) $y = \operatorname{tg}\left(4x - \frac{\pi}{5}\right)$	10) $y = \operatorname{tg}\left(2x - \frac{\pi}{6}\right)$	10) $y = \operatorname{tg}\left(4x - \frac{\pi}{4}\right)$
11) $y = 4\operatorname{ctg}\left(\frac{x}{2} + \frac{\pi}{6}\right)$	11) $y = 3\operatorname{ctg}\left(\frac{x}{6} + \frac{\pi}{2}\right)$	11) $y = 3\operatorname{ctg}\left(\frac{x}{6} + \frac{\pi}{3}\right)$	11) $y = 4\operatorname{ctg}\left(\frac{x}{2} + \frac{\pi}{4}\right)$	11) $y = 3\operatorname{ctg}\left(\frac{x}{3} + \frac{\pi}{6}\right)$
12) $y = 5\sin^3\left(3x + \frac{\pi}{2}\right)$	12) $y = 2\sin^3\left(3x + \frac{\pi}{4}\right)$	12) $y = 8\sin^4\left(4x + \frac{\pi}{2}\right)$	12) $y = 7\sin^3\left(2x + \frac{\pi}{7}\right)$	12) $y = 6\sin^3\left(4x + \frac{\pi}{5}\right)$