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| **№ п/п** | **Новые понятия** | **Содержание** |
| 1 | Производная функции в точке https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-xE_XeC.png | Предел отношения приращения функции https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-9P0_Kd.pngк приращению аргументаhttps://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-WhBYJW.pngприhttps://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-Sybbht.png:https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-Q6DQYB.png. |
| 2. | Основные правила дифференцирования | 1. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-emXxa5.pngгде *с-* постоянное число 2. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-SJ2nK4.pngгде *с-* постоянное число 3. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-lTmoV2.png 4. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-y291S2.png 5. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-qHGbwF.png |
| 3. | Производные основных элементарных функций | 1. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-7LcSFB.png, где https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-fS6swd.png- действительное число; 2. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-q7VVvo.png, https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-a2tIrj.png> 0, https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-lP2GQC.pnghttps://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-4SWkN1.png 3. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-QE1MMm.png, https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-fdw6oK.png 4. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-cL8ebf.png5. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-IUMr1x.png   6. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-0AvuVe.png7.https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-Cvfce8.png   1. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-oVDrGY.png9. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-8eQna4.png, 2. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-1WKCPi.png11. https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-kUE9VP.png |
| 4. | Производная сложной функции | Если https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-8UqsQv.pngгдеhttps://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-sWHaHY.pngтогдаhttps://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-yqBOSX.png |
| 5. | Производная обратной функции | Если https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-ehSt8N.png, аhttps://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-jOAQGL.png- обратная функция, то  https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-0uR9ZD.png |
| 6. | Производная функции, заданной параметрическими уравнениями | Если https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-3p8mPu.pngтоhttps://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-SDImDg.png |
| 7. | Дифференциал функции | https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-xV8Oyo.pngгде https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-lWj5AN.png |
| 8. | Формула Лагранжа | https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-63_DMP.png, где *a<c<b* |
| 9. | Правило Лопиталя | https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-CW8J2m.pnghttps://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-hvvWDC.pngесли  https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-WXho6z.pngи https://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-WViXvQ.pngилиhttps://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-FyTeFg.pngиhttps://studfile.net/html/2706/1149/html_65KBwUPFv7.AUq8/img-AsHi5M.png |