



Mathematik-Übungsblatt mit Lösungen von [www.worksheeps.de](http://www.worksheeps.de) / [www.mathe-aufgaben.net](http://www.mathe-aufgaben.net)  
Mathe-Aufgaben mit Lösungen einfach schnell selbst erstellen.

### Summenregel

1)  $f(x) = (-18)x^{44} + 20$

$$f'(x) = (-792)x^{43}$$
$$f''(x) = (-34056)x^{42}$$

2)  $f(x) = 10x^{41} + (-2)x^{36} + 17x^{28} + 1x^{12} + (-3)$

$$f'(x) = 410x^{40} + (-72)x^{35} + 476x^{27} + 12x^{11}$$
$$f''(x) = 16400x^{39} + (-2520)x^{34} + 12852x^{26} + 132x^{10}$$

3)  $f(x) = (-13)x^{13} + 5$

$$f'(x) = (-169)x^{12}$$
$$f''(x) = (-2028)x^{11}$$

4)  $f(x) = (-12)x^{32} + 13$

$$f'(x) = (-384)x^{31}$$
$$f''(x) = (-11904)x^{30}$$

5)  $f(x) = 7x^{14} + (-16)x^{34} + 4$

$$f'(x) = 98x^{13} + (-544)x^{33}$$
$$f''(x) = 1274x^{12} + (-17952)x^{32}$$

6)  $f(x) = (-15)x^{38} + 12$

$$f'(x) = (-570)x^{37}$$
$$f''(x) = (-21090)x^{36}$$

7)  $f(x) = 1x^{31} + (-3)$

$$f'(x) = 31x^{30}$$
$$f''(x) = 930x^{29}$$

8)  $f(x) = 20x^{17} + (-4)x^{28} + (-5)$

$$f'(x) = 340x^{16} + (-112)x^{27}$$
$$f''(x) = 5440x^{15} + (-3024)x^{26}$$

9)  $f(x) = 17x^8 + 19x^{40} + (-12)$

$$f'(x) = 136x^7 + 760x^{39}$$
$$f''(x) = 952x^6 + 29640x^{38}$$

10)  $f(x) = 14x^{18} + 3$

$$f'(x) = 252x^{17}$$
$$f''(x) = 4284x^{16}$$