



Basic Derivation Worksheet

1. $\frac{d}{dx}(10x^3 + 5x^2 + 9x + 9)$
2. $\frac{d}{dx}(9x^2 + 8x + 3)$
3. $\frac{d}{dx}(10x^2 + 10x + 5)$
4. $\frac{d}{dx}(8x + 10)$
5. $\frac{d}{dx}(8x^3 + 4x^2 + 2x + 4)$
6. $\frac{d}{dx}(4x^4 + 10x^3 + 6x^2 + 10x + 4)$
7. $\frac{d}{dx}(10x^2 + 8x + 7)$
8. $\frac{d}{dx}(x + 1)$
9. $\frac{d}{dx}(3x + 3)$
10. $\frac{d}{dx}(7x + 8)$
11. $\frac{d}{dx}(x + 5)$
12. $\frac{d}{dx}(5x^2 + 2x + 9)$
13. $\frac{d}{dx}(9x^2 + 9x + 3)$
14. $\frac{d}{dx}(6x^3 + 10x^2 + 4x + 8)$
15. $\frac{d}{dx}(6x^2 + 10x + 4)$
16. $\frac{d}{dx}(7x + 5)$
17. $\frac{d}{dx}(6x^4 + 7x^3 + x^2 + 6x + 9)$
18. $\frac{d}{dx}(2x^4 + 4x^3 + x^2 + 5x + 5)$
19. $\frac{d}{dx}(x + 4)$
20. $\frac{d}{dx}(8x^3 + 8x^2 + 4x + 9)$
21. $\frac{d}{dx}(10x^2 + 4x + 3)$
22. $\frac{d}{dx}(8x^2 + 7x + 5)$



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23. $\frac{d}{dx}(2x + 3)$
24. $\frac{d}{dx}(3x + 1)$
25. $\frac{d}{dx}(x^4 + 8x^3 + 5x^2 + 10x + 9)$
26. $\frac{d}{dx}(x^2 + 4x + 5)$
27. $\frac{d}{dx}(7x + 4)$
28. $\frac{d}{dx}(7x^4 + 3x^3 + 8x^2 + 3x + 1)$
29. $\frac{d}{dx}(10x^3 + 7x^2 + 6x + 6)$
30. $\frac{d}{dx}(9x^2 + 4x + 5)$
31. $\frac{d}{dx}(6x + 2)$
32. $\frac{d}{dx}(4x^2 + 6x + 5)$
33. $\frac{d}{dx}(10x^2 + 10x + 8)$
34. $\frac{d}{dx}(4x^4 + 6x^3 + 8x^2 + 3x + 7)$
35. $\frac{d}{dx}(2x + 3)$
36. $\frac{d}{dx}(5x^4 + 7x^3 + 10x^2 + 8x + 1)$
37. $\frac{d}{dx}(4x + 10)$
38. $\frac{d}{dx}(7x + 7)$
39. $\frac{d}{dx}(10x^2 + 10x + 9)$
40. $\frac{d}{dx}(7x^4 + 3x^3 + x^2 + 7x + 4)$
41. $\frac{d}{dx}(7x^4 + 10x^3 + 4x^2 + 10x + 6)$
42. $\frac{d}{dx}(3x^3 + 2x^2 + 7x + 3)$
43. $\frac{d}{dx}(3x^4 + 4x^3 + 8x^2 + 6x + 6)$
44. $\frac{d}{dx}(10x^2 + 2x + 7)$



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45. $\frac{d}{dx}(4x^3 + 7x^2 + 3x + 4)$

46. $\frac{d}{dx}(9x + 9)$

47. $\frac{d}{dx}(5x^2 + 6x + 2)$

48. $\frac{d}{dx}(7x^3 + 6x^2 + 3x + 8)$

49. $\frac{d}{dx}(8x^3 + 3x^2 + x + 5)$

50. $\frac{d}{dx}(4x^2 + 10x + 2)$



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Answer Key

- | | | | |
|-----|----------------------------|-----|--------------------------|
| 1. | $30x^2 + 10x + 9$ | 12. | $10x + 2$ |
| 2. | $18x + 8$ | 13. | $18x + 9$ |
| 3. | $20x + 10$ | 14. | $18x^2 + 20x + 4$ |
| 4. | 8 | 15. | $12x + 10$ |
| 5. | $24x^2 + 8x + 2$ | 16. | 7 |
| 6. | $16x^3 + 30x^2 + 12x + 10$ | 17. | $24x^3 + 21x^2 + 2x + 6$ |
| 7. | $20x + 8$ | 18. | $8x^3 + 12x^2 + 2x + 5$ |
| 8. | 1 | 19. | 1 |
| 9. | 3 | 20. | $24x^2 + 16x + 4$ |
| 10. | 7 | 21. | $20x + 4$ |
| 11. | 1 | 22. | $16x + 7$ |



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|-----|---------------------------|-----|---------------------------|
| 23. | x^2 | 34. | $16x^3 + 18x^2 + 16x + 3$ |
| 24. | x^3 | 35. | x^2 |
| 25. | $4x^3 + 24x^2 + 10x + 10$ | 36. | $20x^3 + 21x^2 + 20x + 8$ |
| 26. | $2x + 4$ | 37. | x^4 |
| 27. | x^7 | 38. | x^7 |
| 28. | $28x^3 + 9x^2 + 16x + 3$ | 39. | $20x + 10$ |
| 29. | $30x^2 + 14x + 6$ | 40. | $28x^3 + 9x^2 + 2x + 7$ |
| 30. | $18x + 4$ | 41. | $28x^3 + 30x^2 + 8x + 10$ |
| 31. | x^6 | 42. | $9x^2 + 4x + 7$ |
| 32. | $8x + 6$ | 43. | $12x^3 + 12x^2 + 16x + 6$ |
| 33. | $20x + 10$ | 44. | $20x + 2$ |



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45. $12x^2 + 14x + 3$

46. 9

47. $10x + 6$

48. $21x^2 + 12x + 3$

49. $24x^2 + 6x + 1$

50. $8x + 10$