WEEK 1

IMPERIAL COLLEGE LONDON

DEPARTMENT OF COMPUTING

Derivative

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1 Gredients and Derivitive

1.1 Definition of a derivative

- limitation

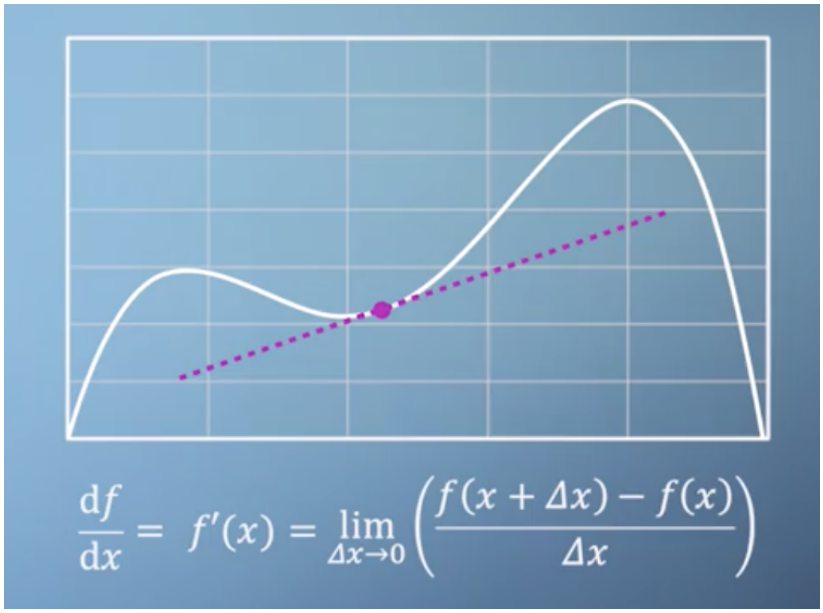

Figure 1: This is a limation of derivtive

- sum rule

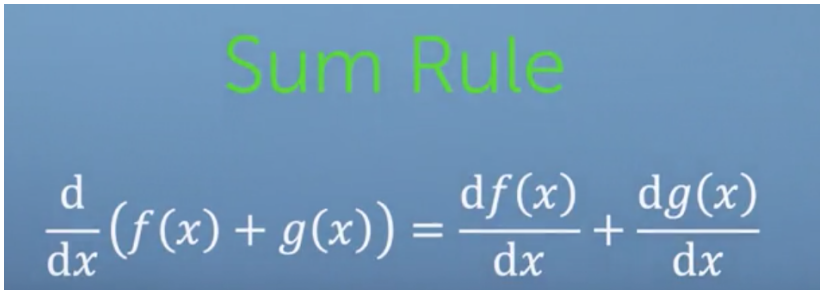

Figure 2: This is a sum rule

- power rule

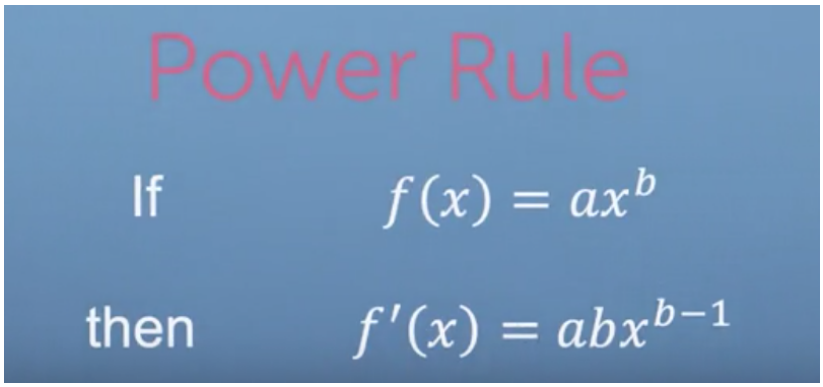

Figure 3: This is a power rule

1.2 Differentiation examples and special cases

- case 1

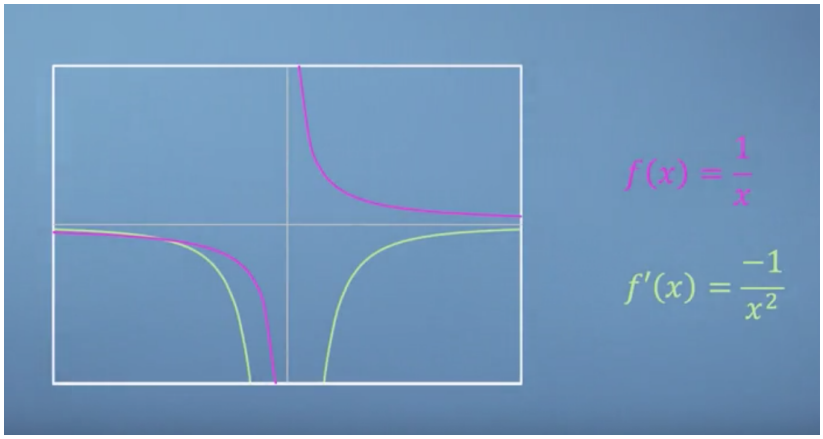

Figure 4: This is a 1/x

- case 2

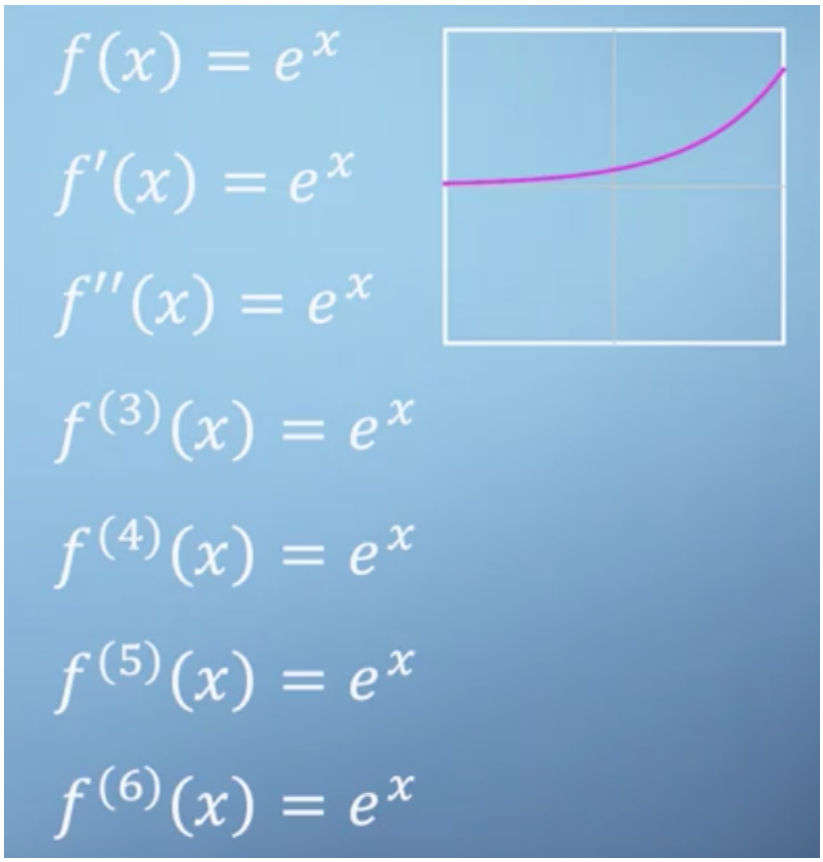

Figure 5: This is a ex

- case 3

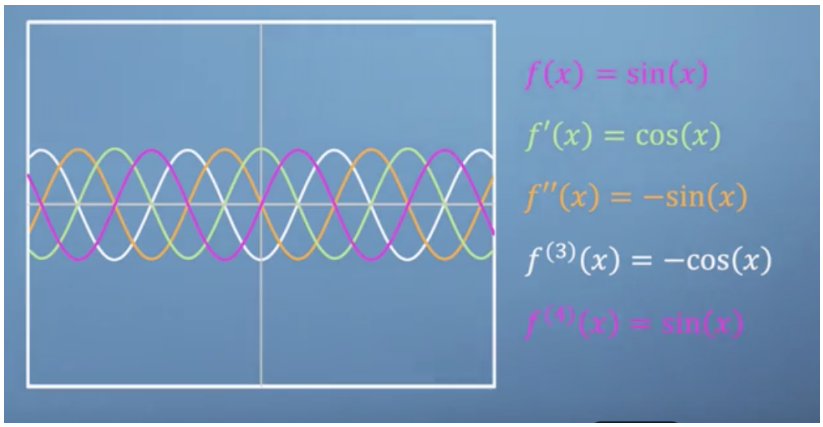

Figure 6: This is a sin(x)

2 time saving rules

Figure 7: This is a sin(x)

- product rules

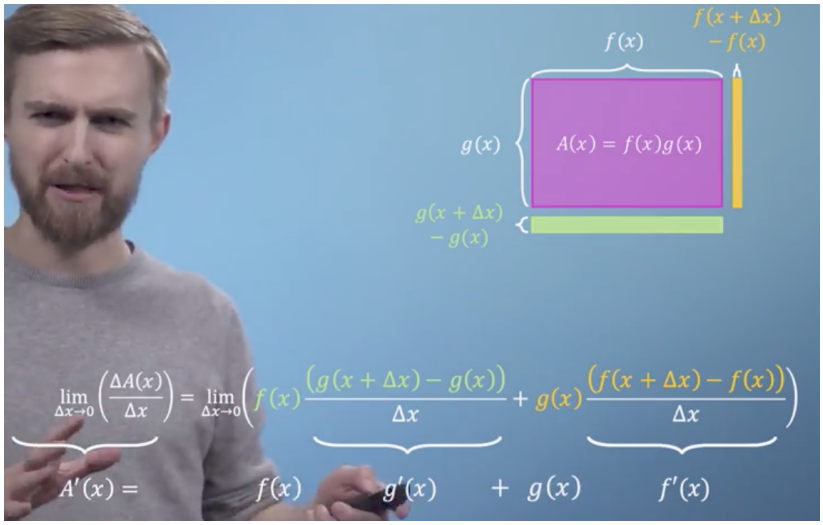

Figure 8: This is a sin(x)

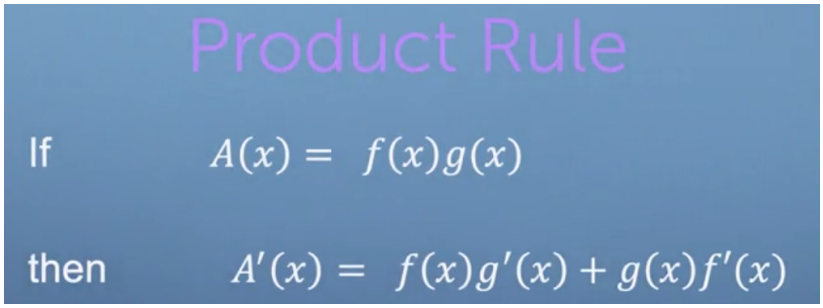

Figure 9: This is a sin(x)

- chain rules

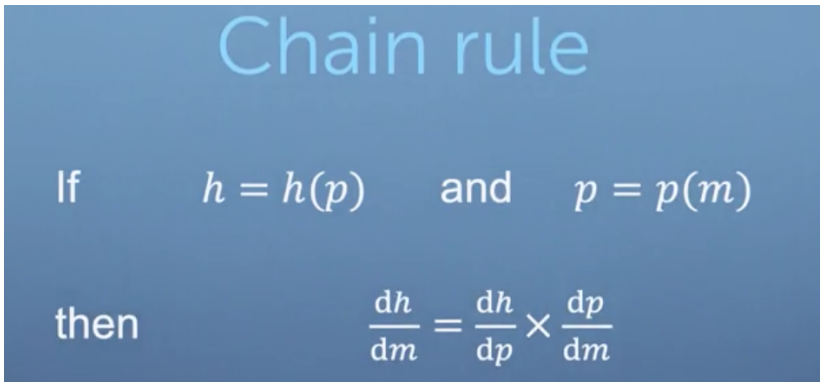

Figure 10: This is a sin(x)