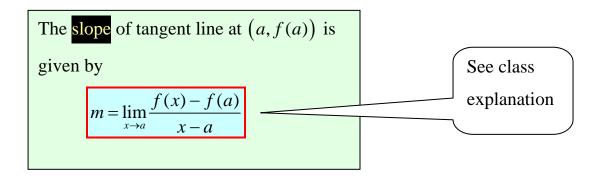
Learning outcomes

After completing this section, you will inshaAllah be able to

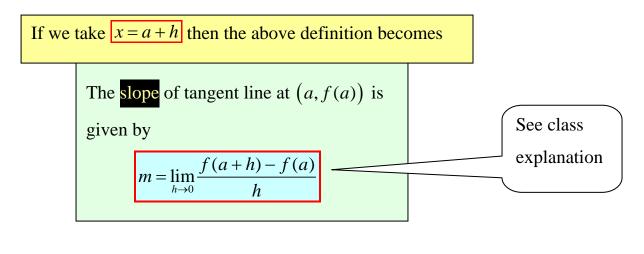
- 1. use a special type of limit to find slopes of tangent lines
- 2. use a special type of limit to find rate of change of a function

Slope of tangent line to a curve y=f(x)

• Given a curve y = f(x)



See example 1 done in class

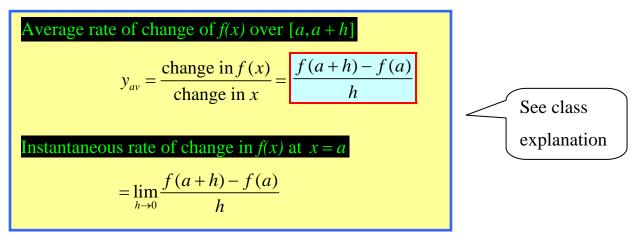


See example 2 done in class

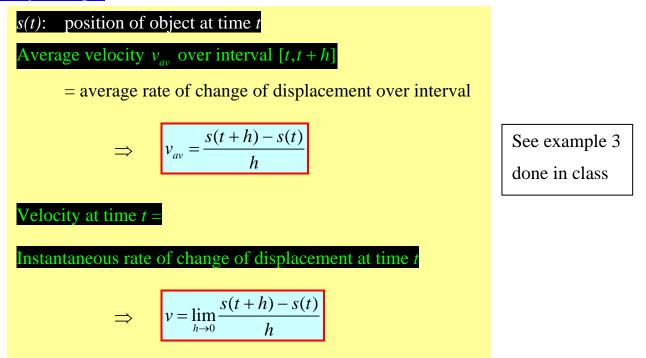
2.72

Instantaneous rate of change

• Given a function y = f(x)



Every day example



- Given a function y = f(x).
- We have seen in this section that limits of the form

$$\lim_{h \to 0} \frac{f(a+h) - f(a)}{h}$$

are very special and can be used to answer important questions.

• From the next lecture we will focus on studying such type of limits.

End of 2.7