

Chapter 14

Applications of Differentiation



Fig. 14-1: Tangent and normal to a curve illustrated.

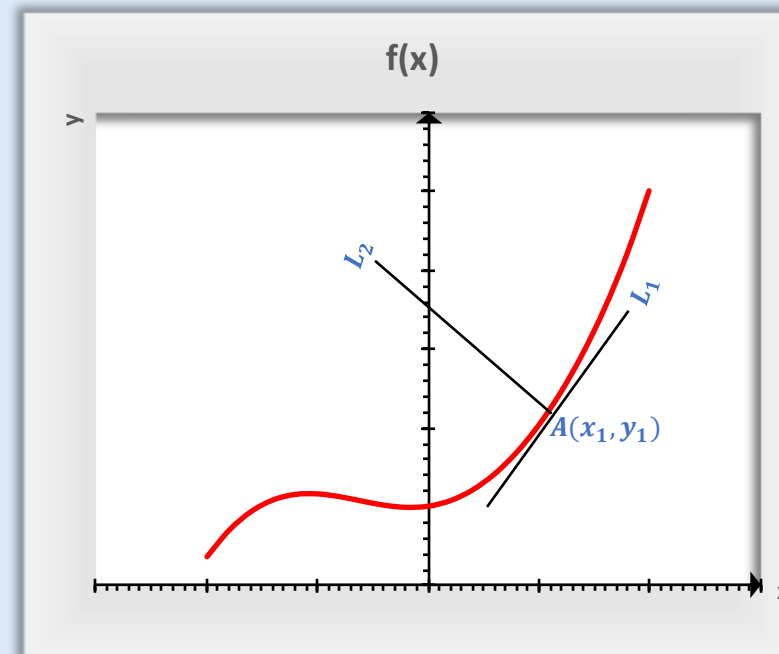
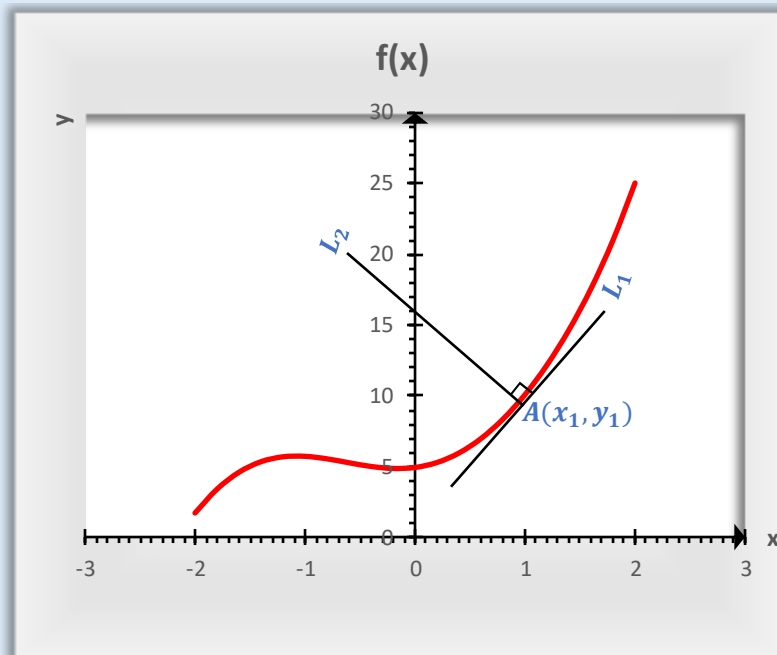


Fig. 14-2: (a) Increasing function and (b) decreasing function.

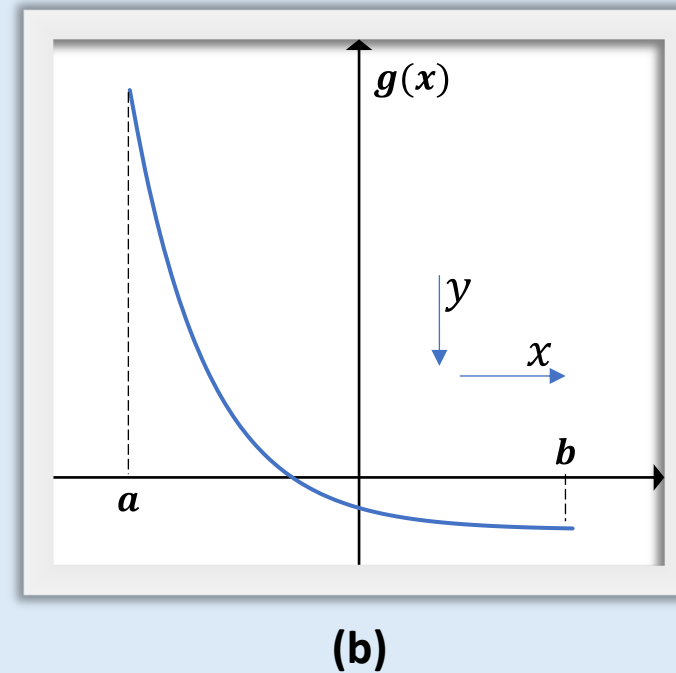
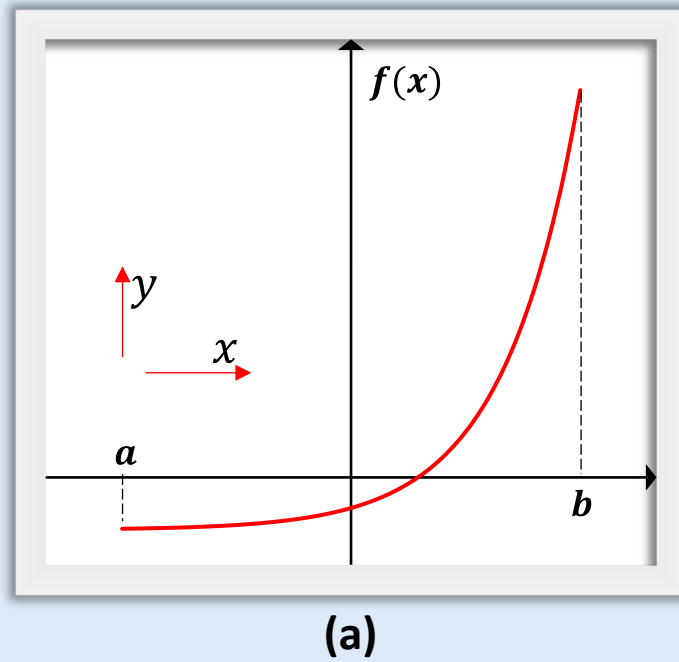


Fig. 14-3: A function that increases and decreases in a particular interval illustrated.

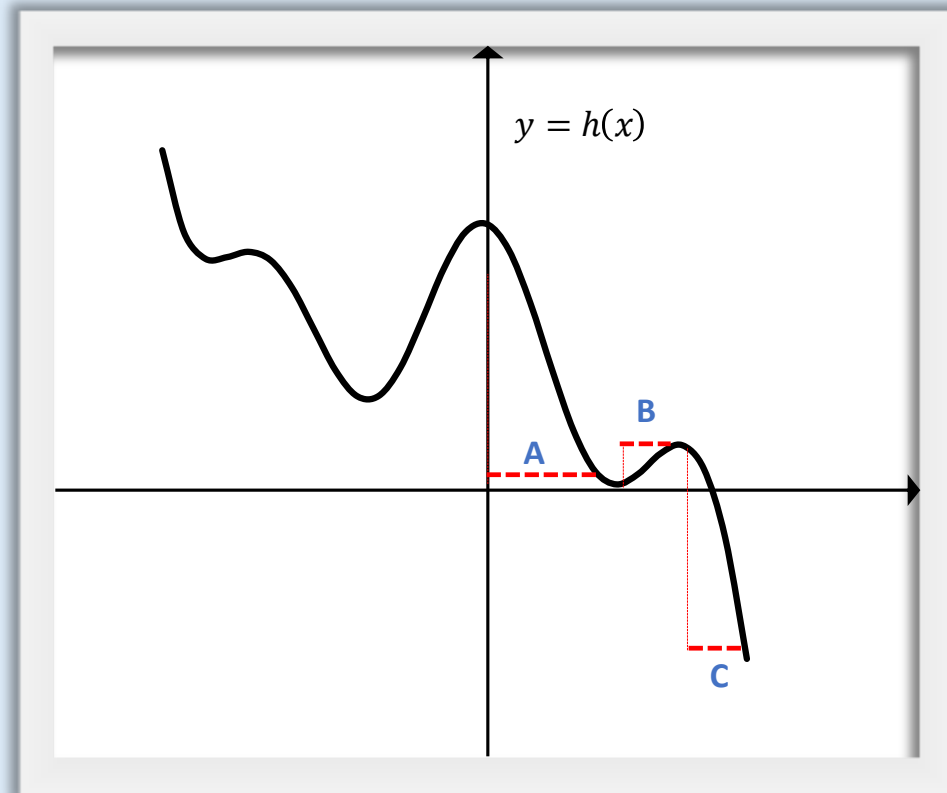


Fig. 14-4: Acceleration (as an increasing function of velocity) illustrated.

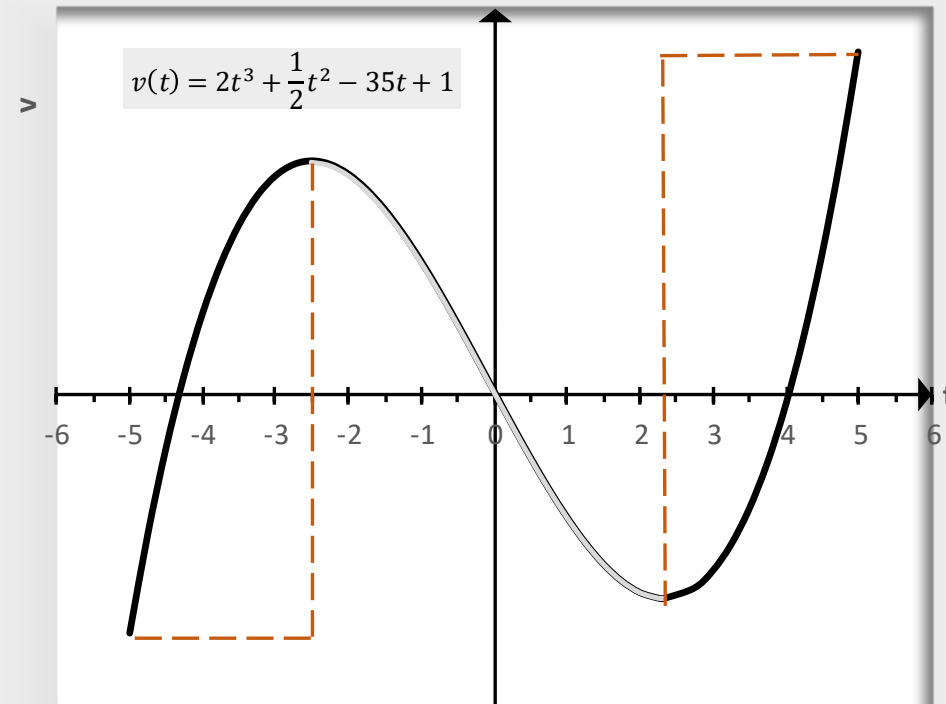


Fig. 14-5: Deceleration (as a decreasing function of velocity) illustrated.

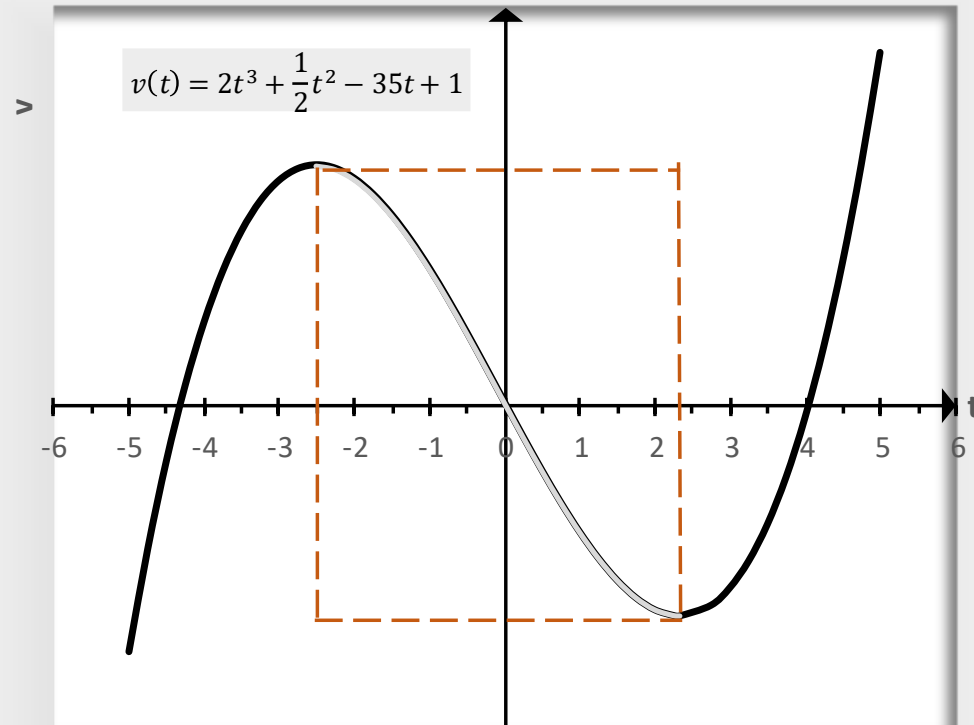


Fig. 14-6: Stationary points illustrated.

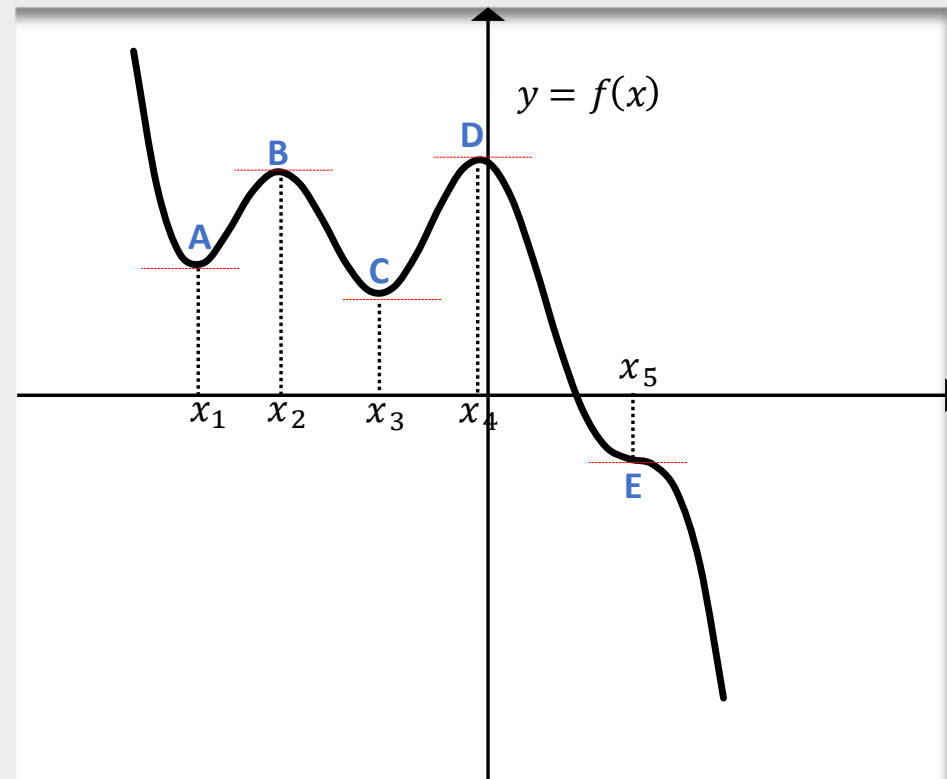


Fig. 14-7: Minimum and maximum points illustrated.

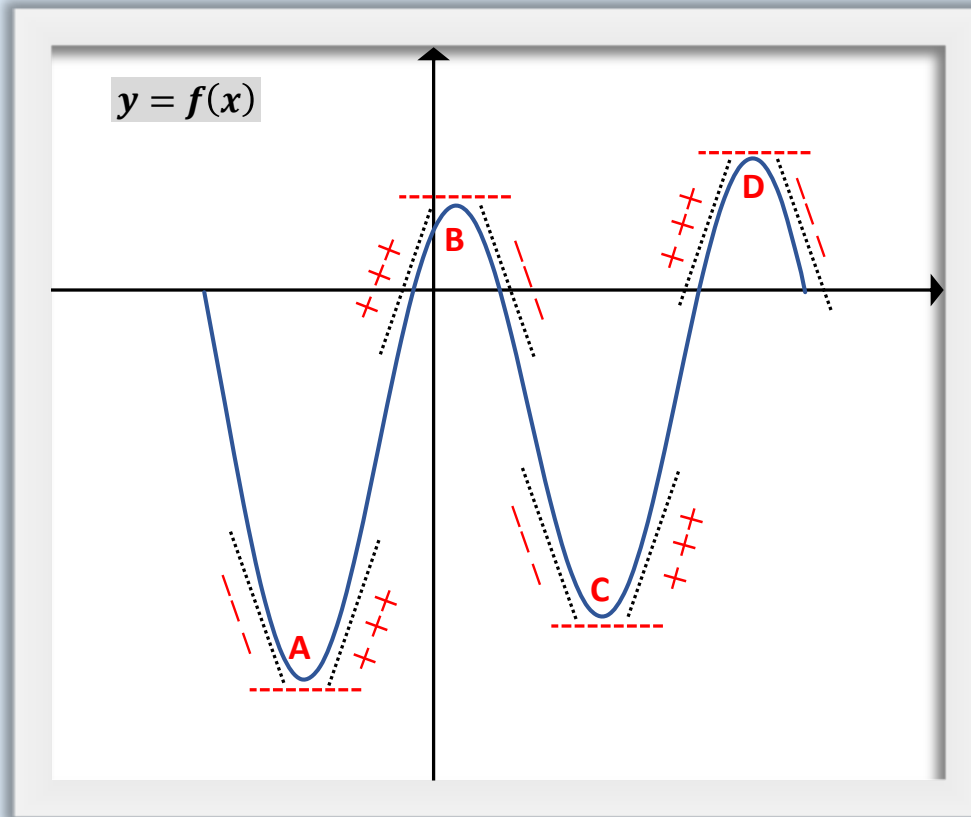


Fig. 14-8: Minimum point illustrated.

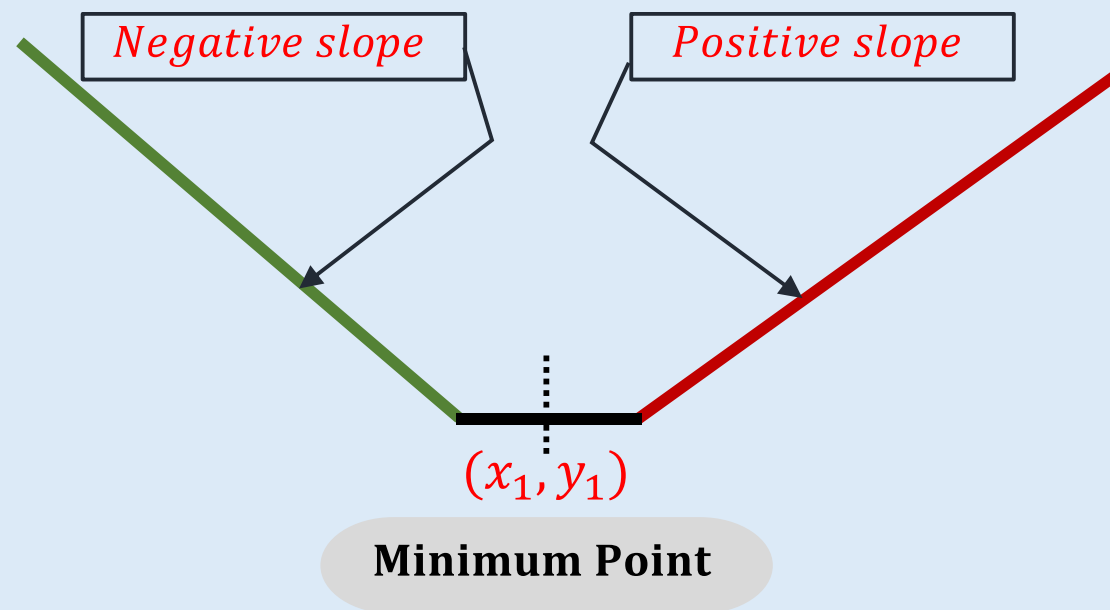


Fig. 14-9: Maximum point illustrated.

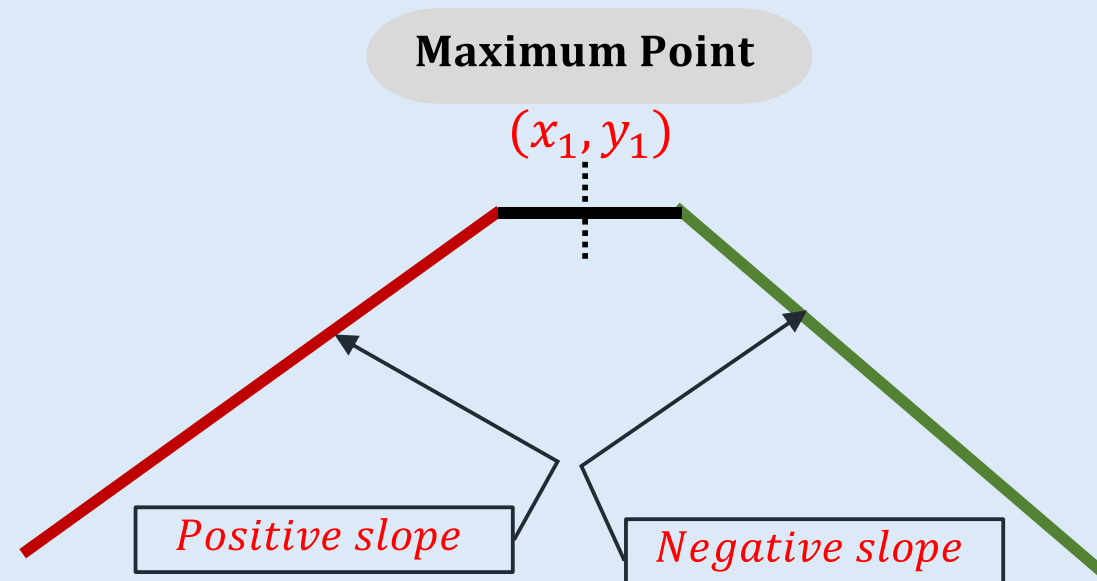


Fig. 14-10: Determining the minimum point using change of gradient at stationary point illustrated.

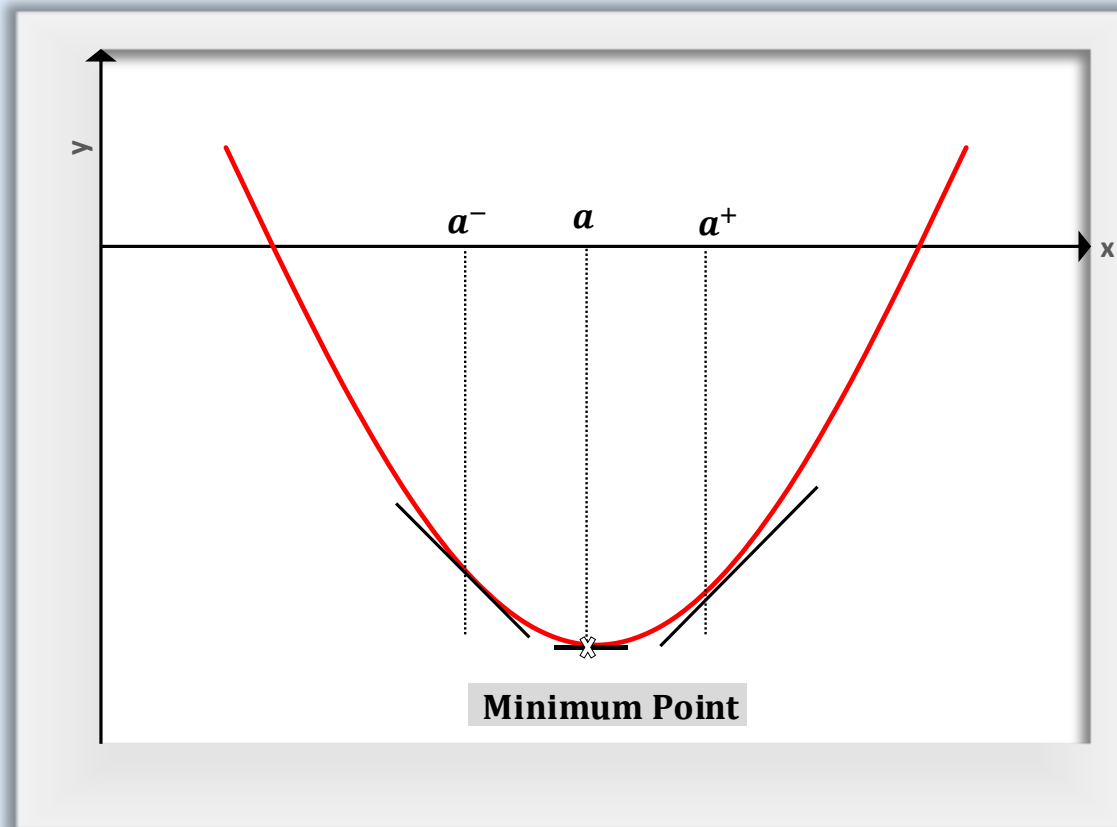


Fig. 14-11: Determining the maximum point using change of gradient at stationary point illustrated.

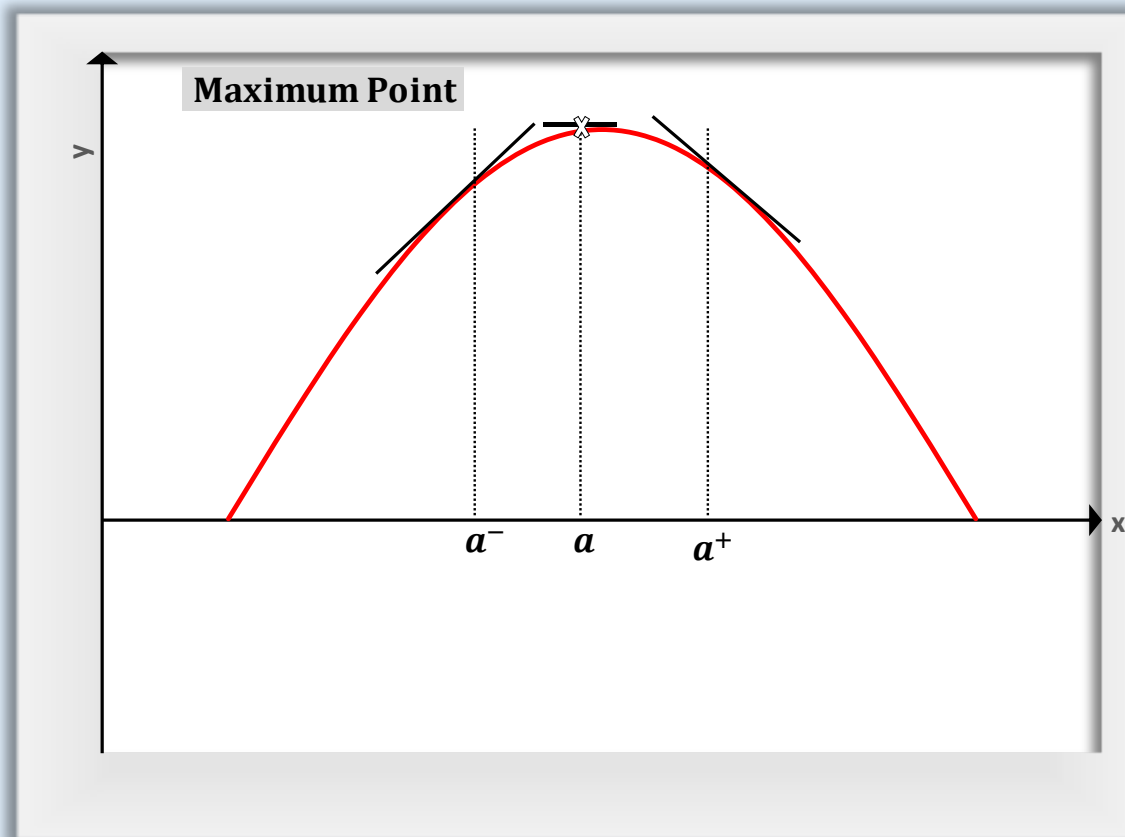


Fig. 14-12: Solution to Example 8(b).

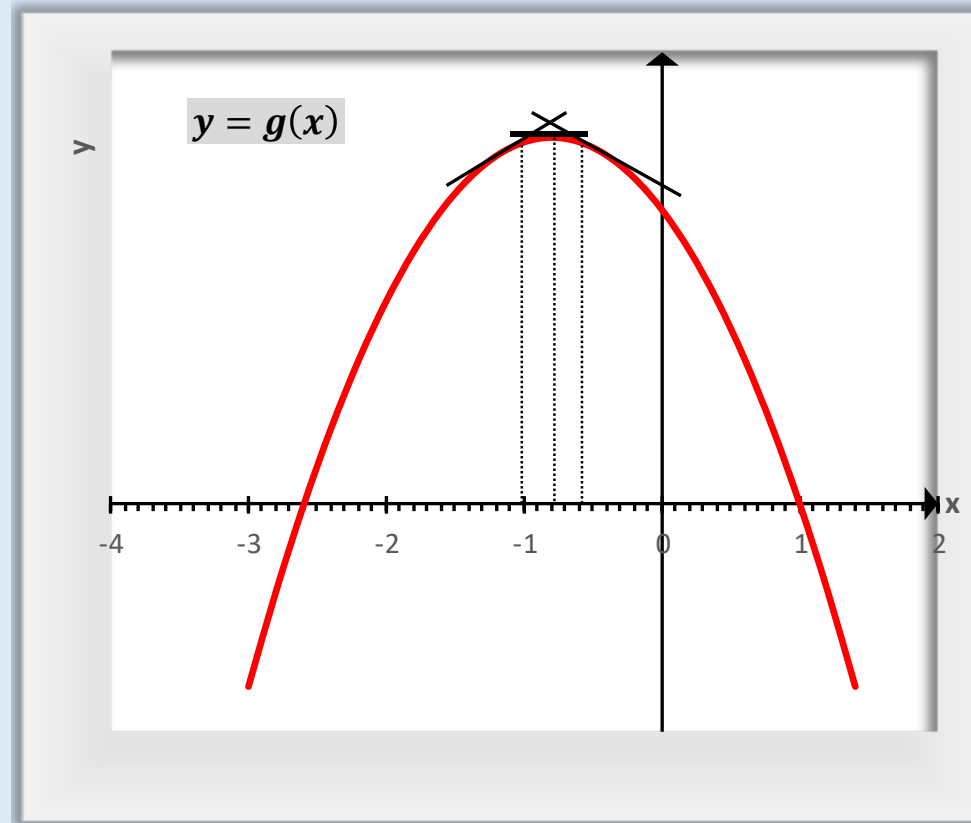


Fig. 14-13: Solution to Example 9(c).

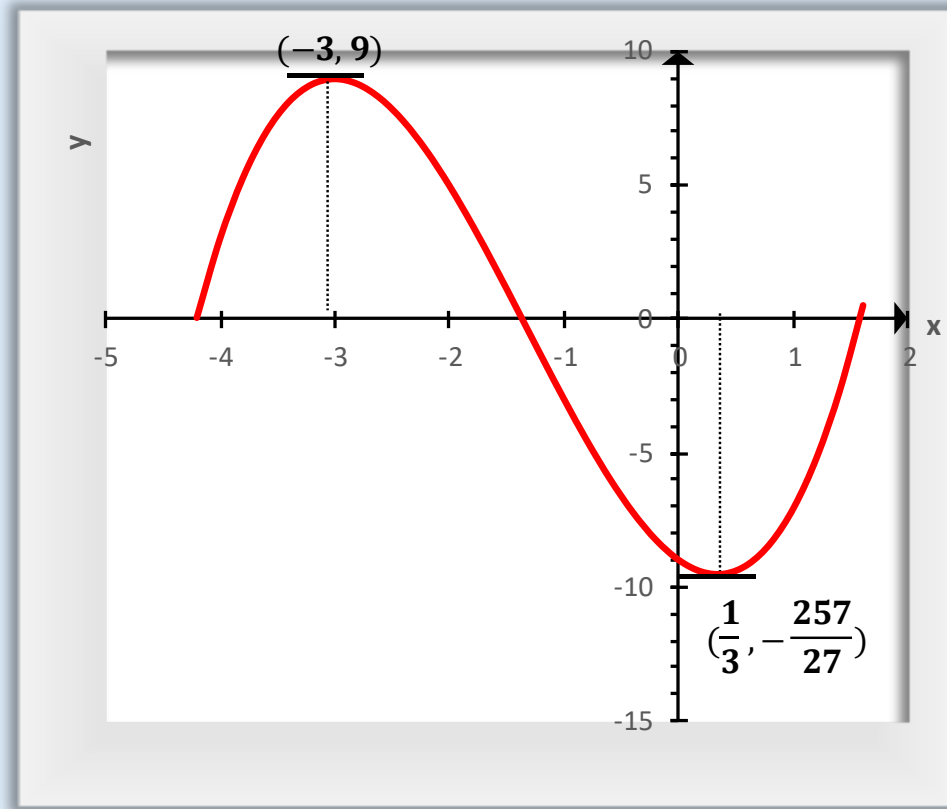


Fig. 14-14: Point of inflexion illustrated, showing rising PI (a) and (c) and falling PI (b) and (d).

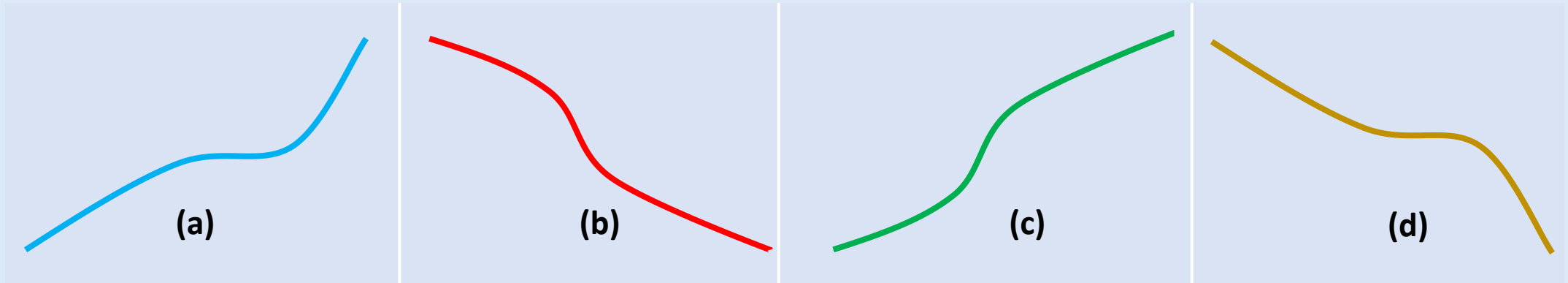


Fig. 14-15: Solution to Example 11.

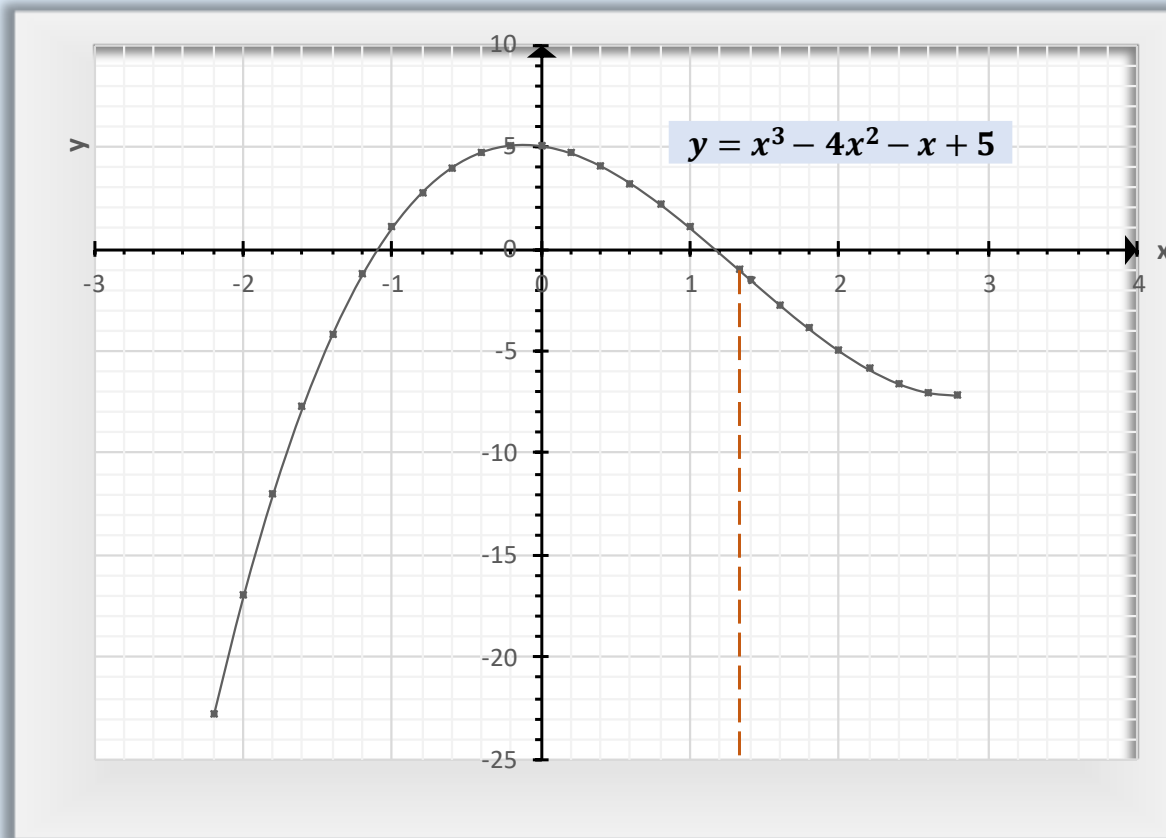


Fig. 14-16: Solution to Example 12(a).

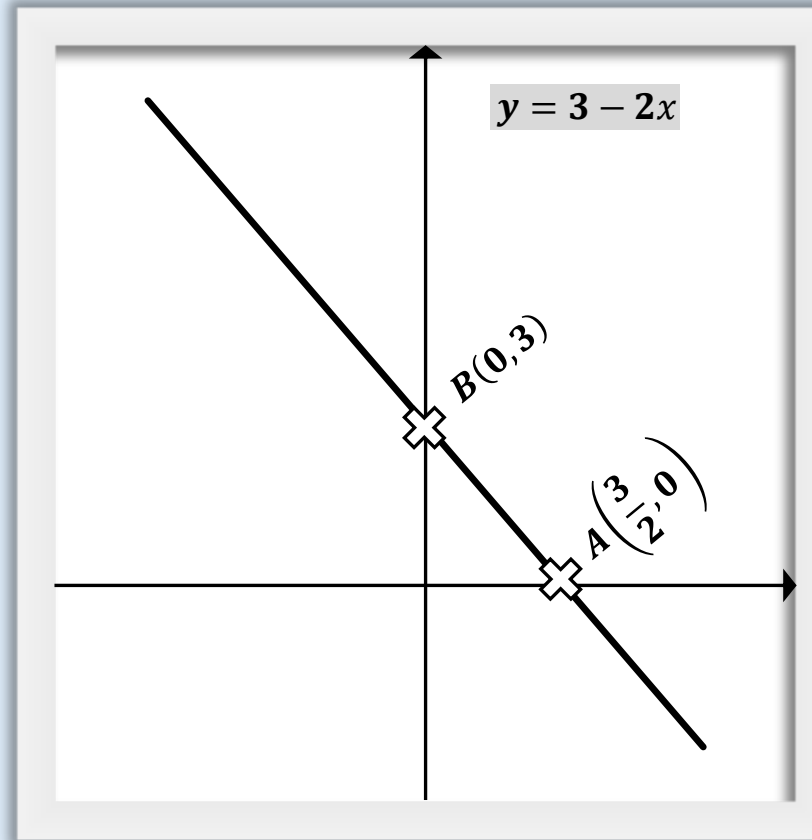


Fig. 14-17: Solution to Example 12(b).

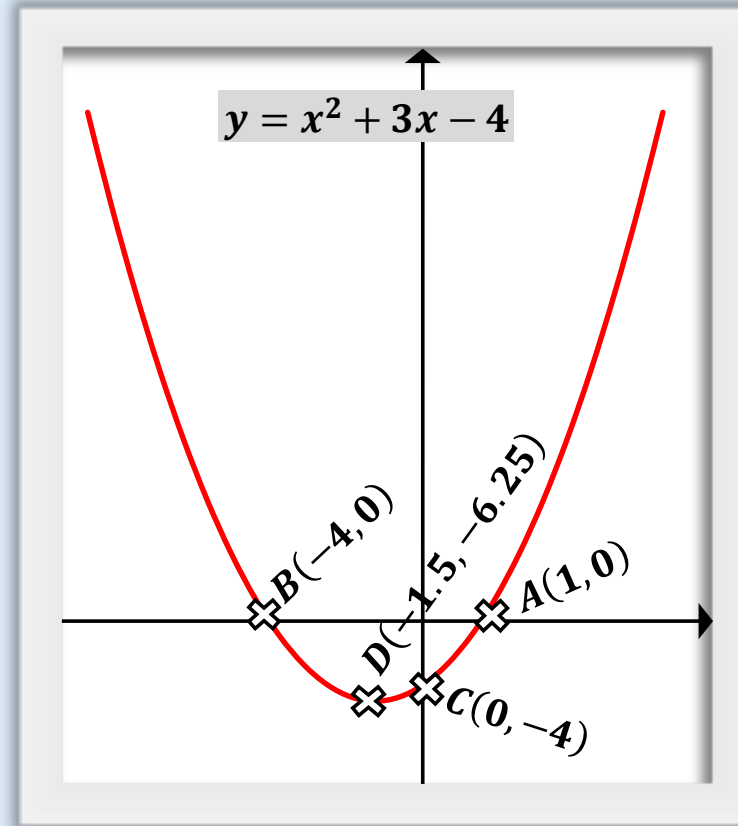
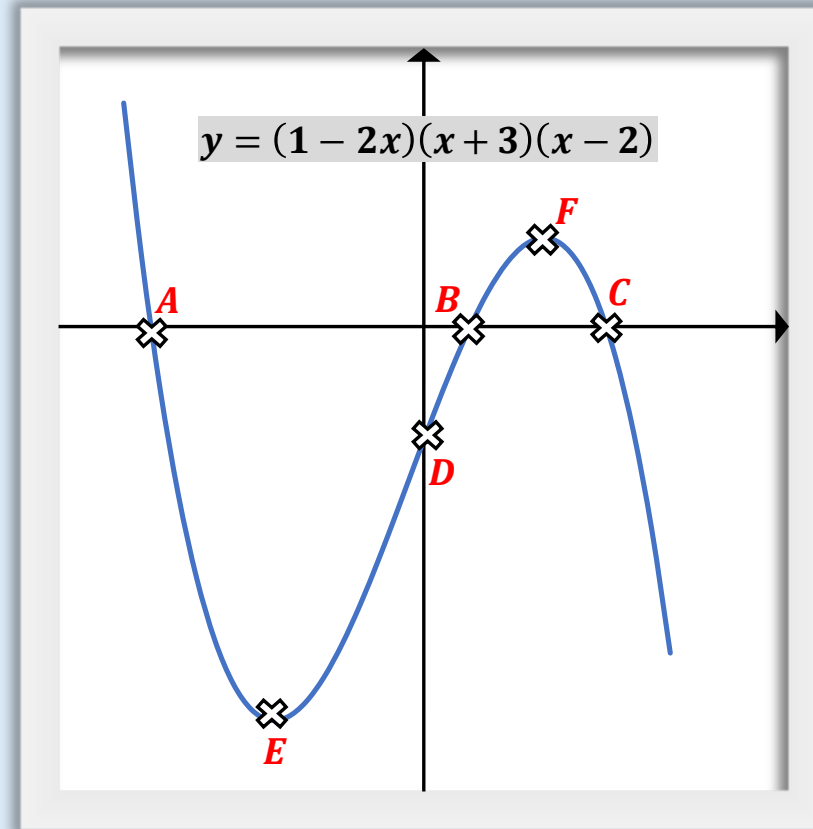


Fig. 14-18: Solution to Example 11(c).



Thank You

