

Chapter 16

Definite Integration



Fig. 16-1: Definite integral illustrated.

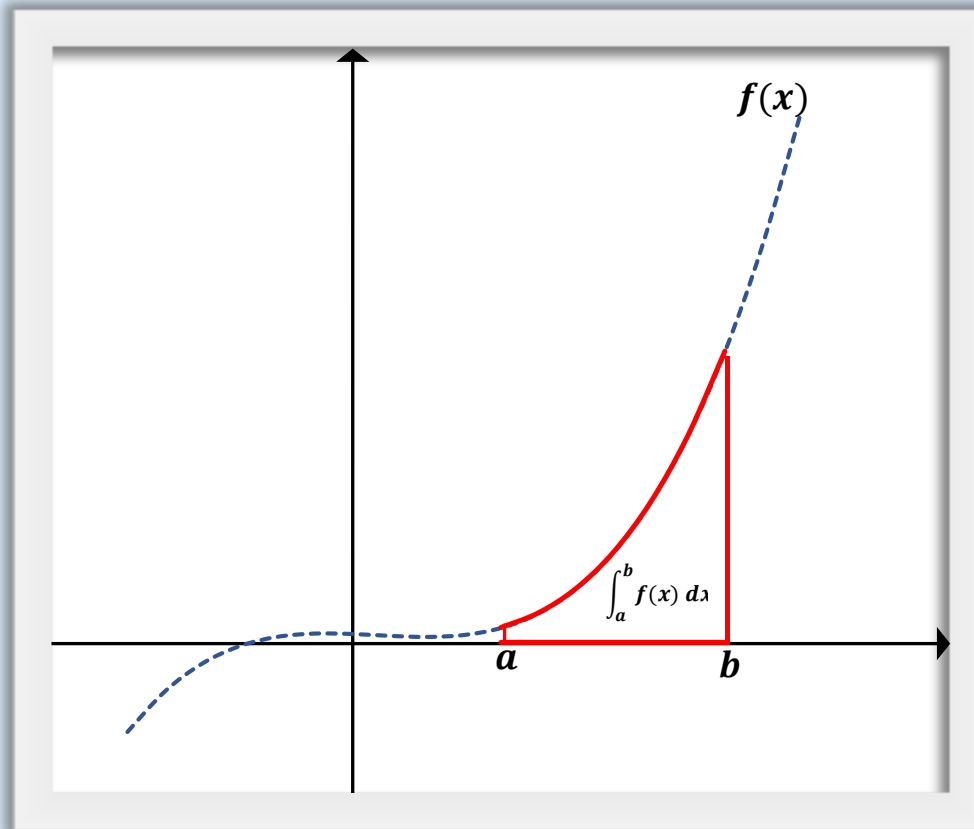


Fig. 16-2: Velocity–time graph analysed.

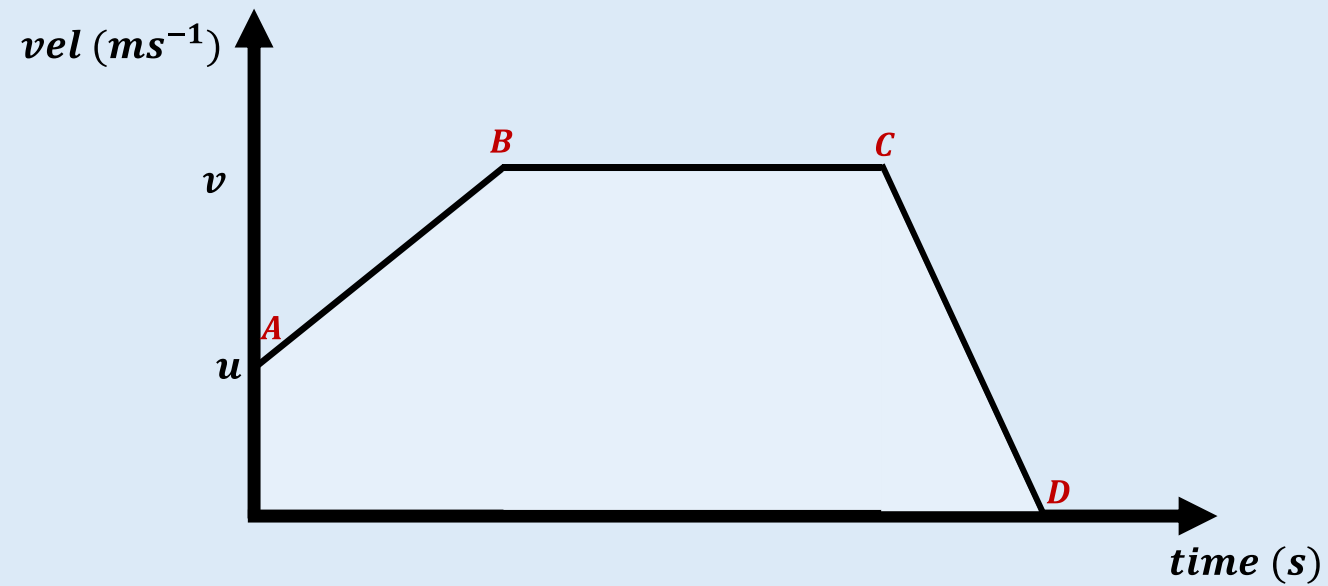


Fig. 16-3: Solution to Example 1(a).

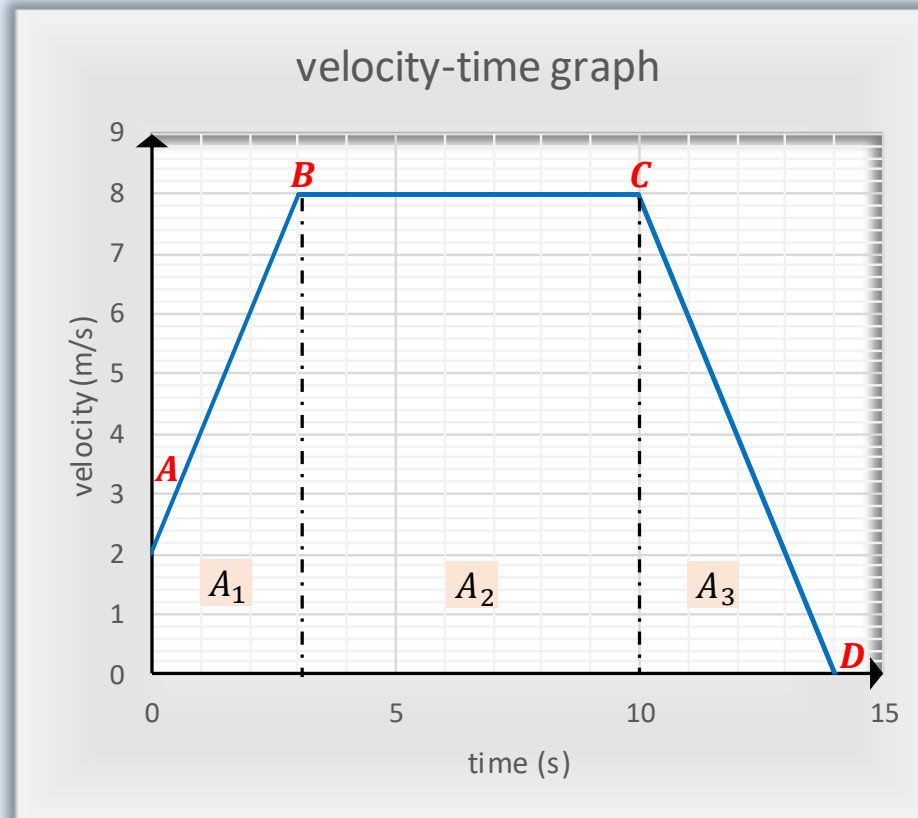


Fig. 16-4: Solution to Example 1(b).

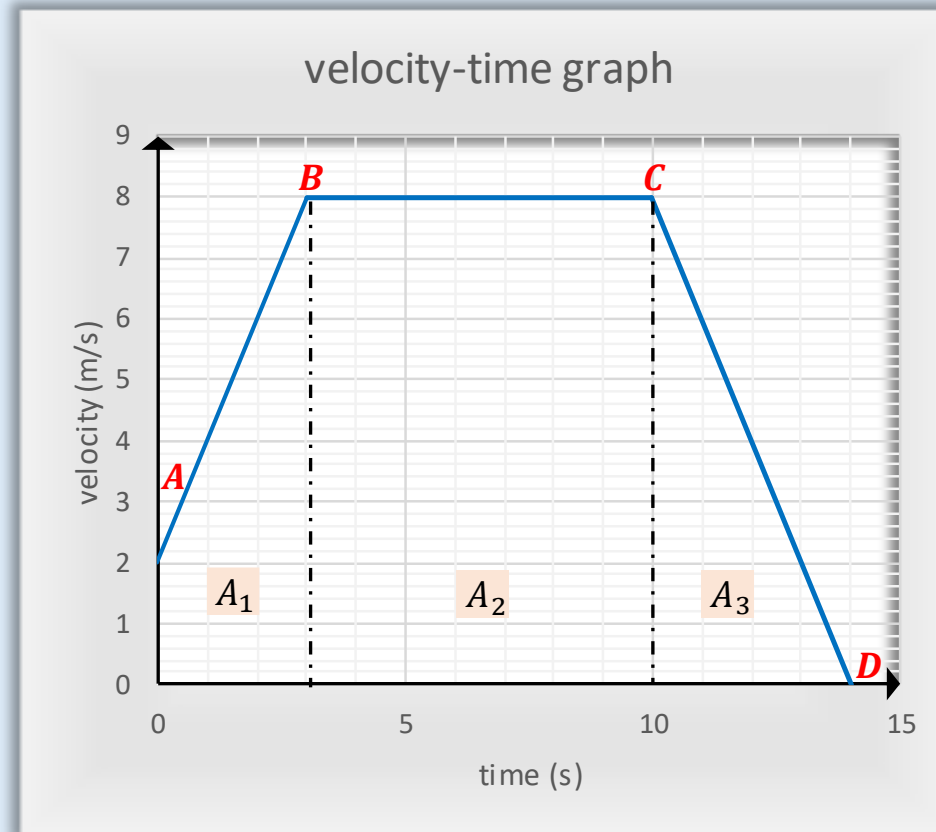


Fig. 16-5: Solution to Example 2(a).

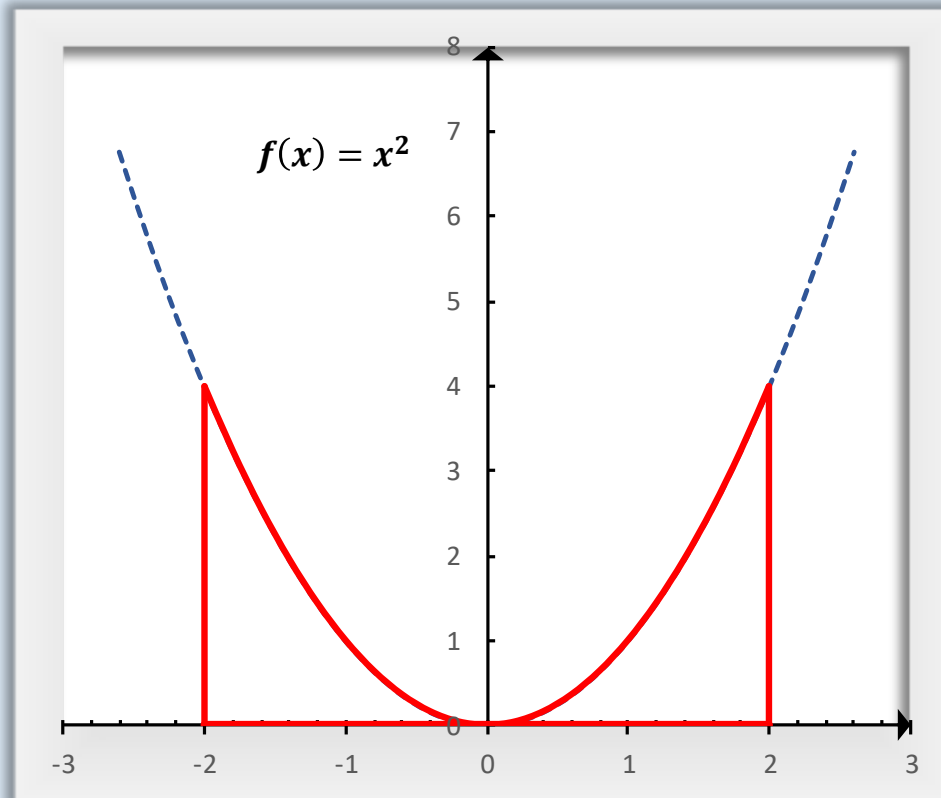


Fig. 16-6: Solution to Example 2(b).

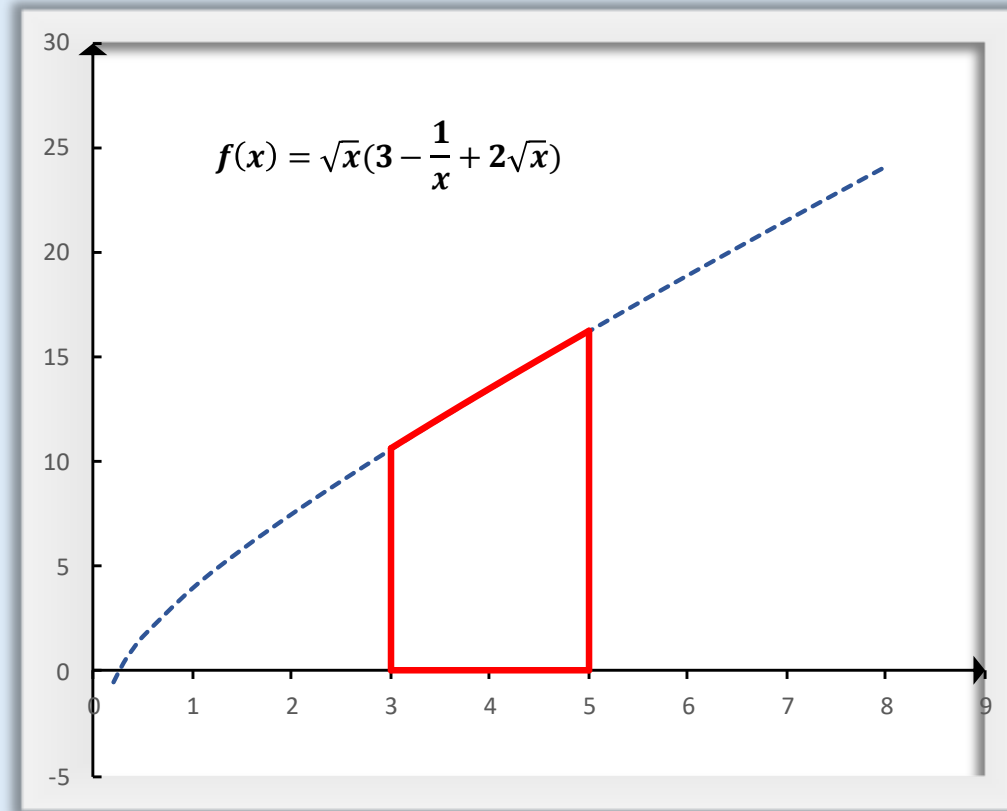


Fig. 16-7: Solution to Example 3(b).

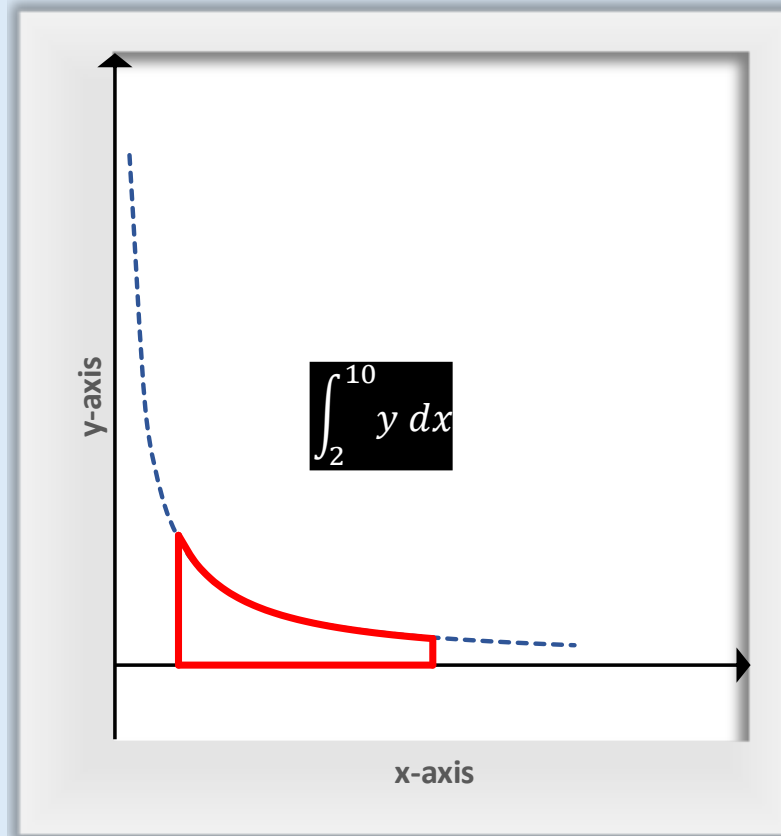


Fig. 16-8: Solution to Example 4.

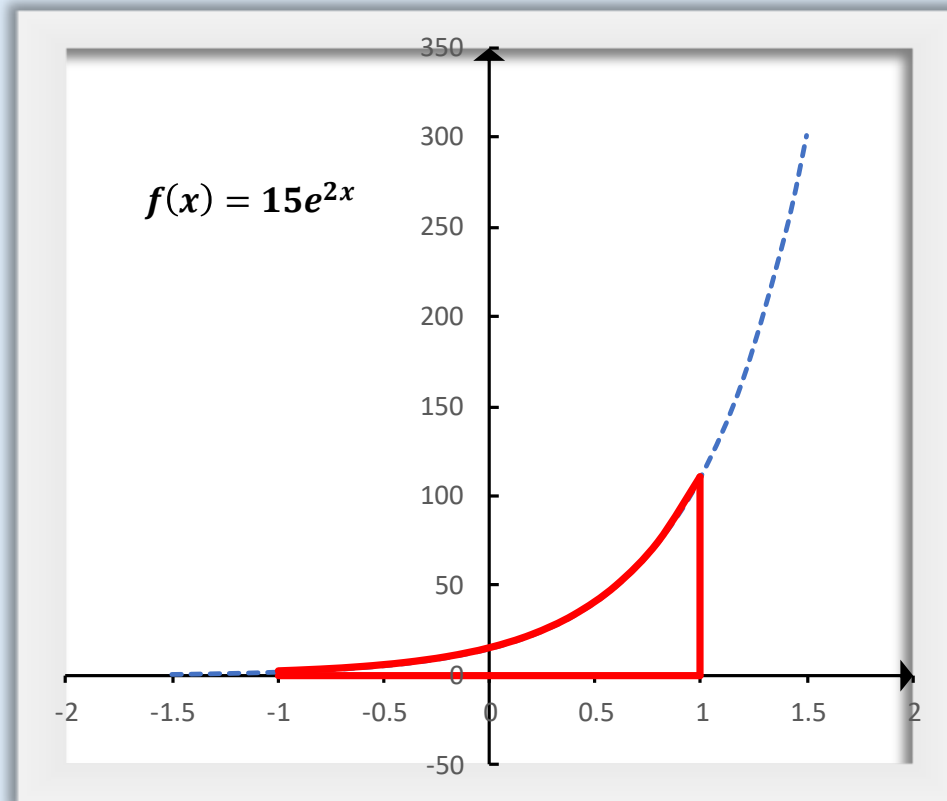


Fig. 16-9: Solution to Example 5 – Part I.

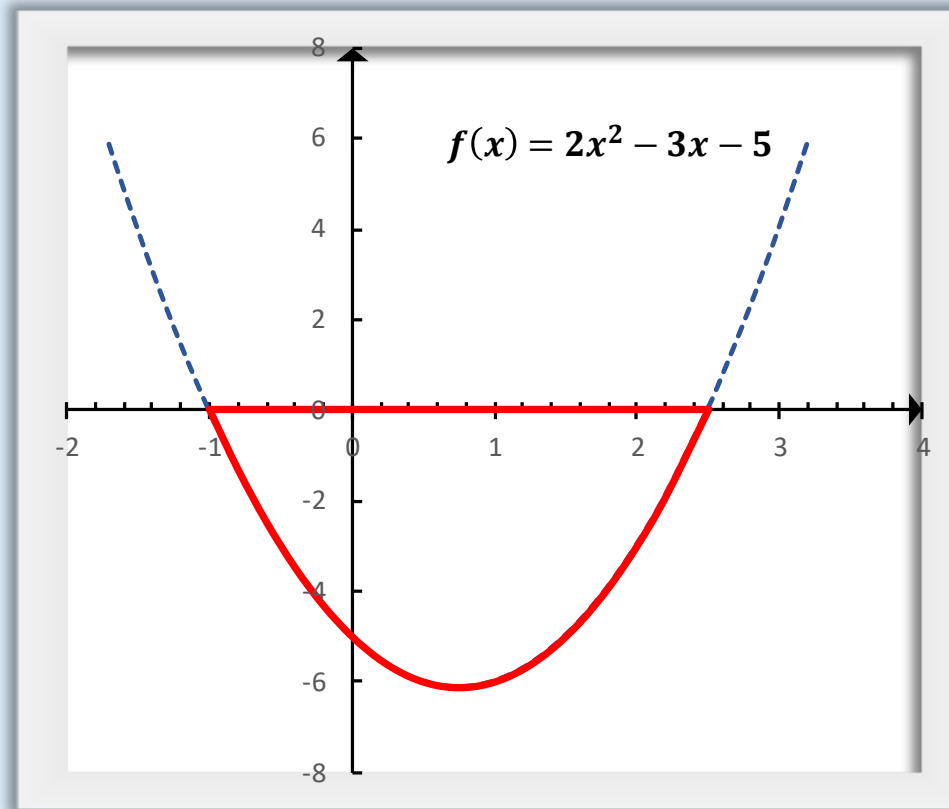


Fig. 16-10: Solution to Example 5 – Part II.

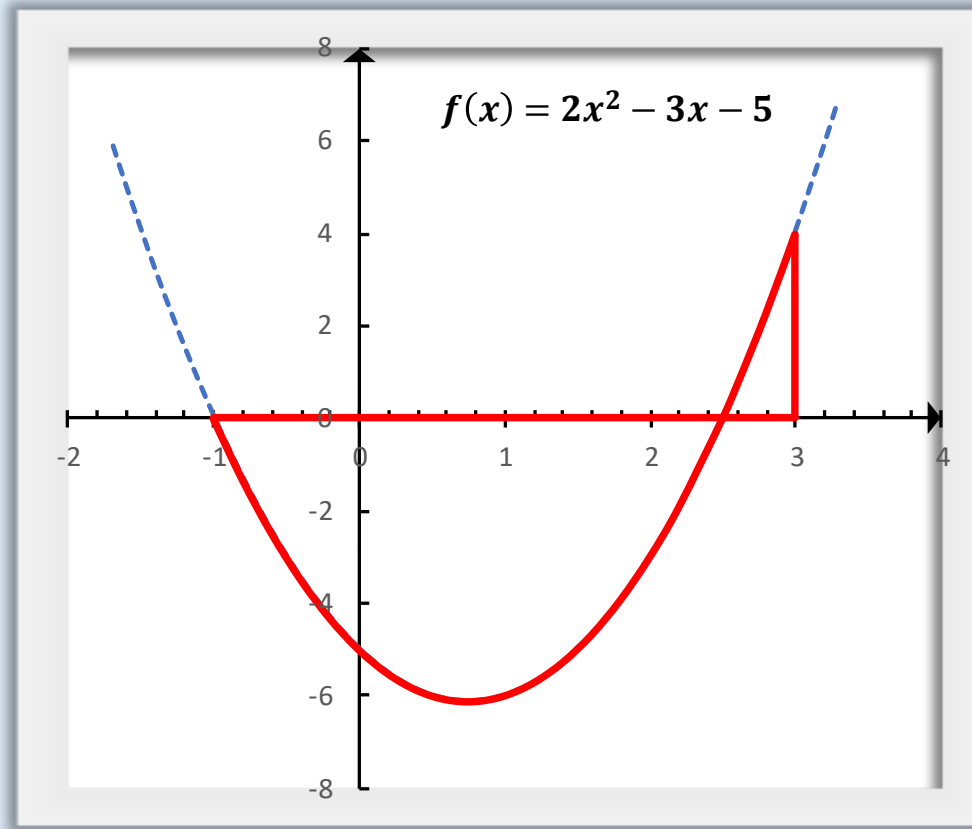


Fig. 16-11: Solution to Example 6.

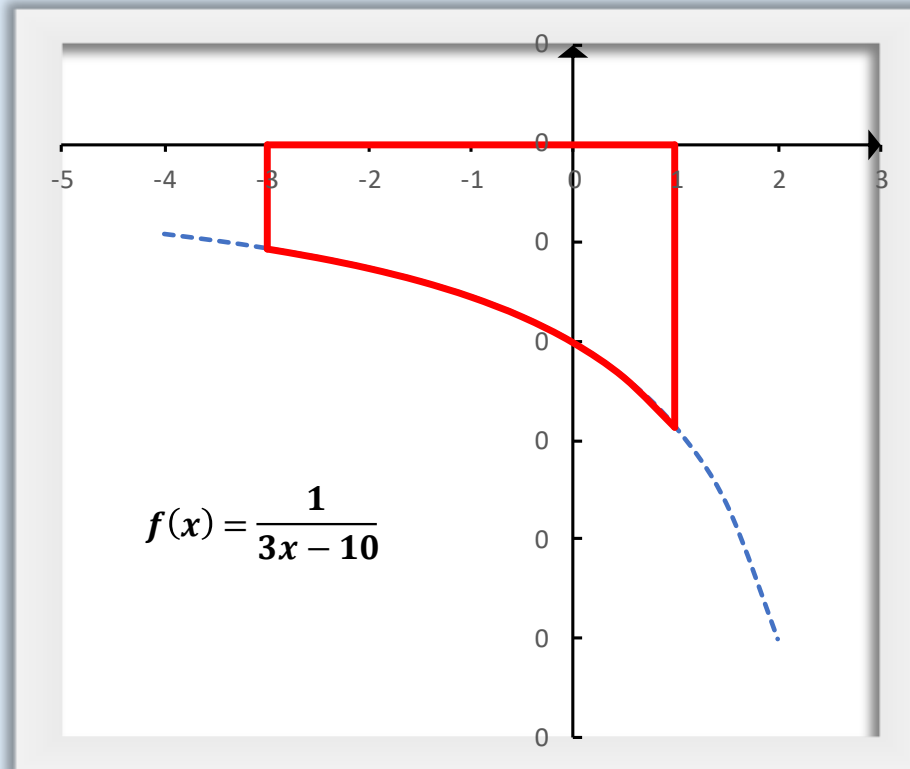


Fig. 16-12: Solution to Example 7(c).

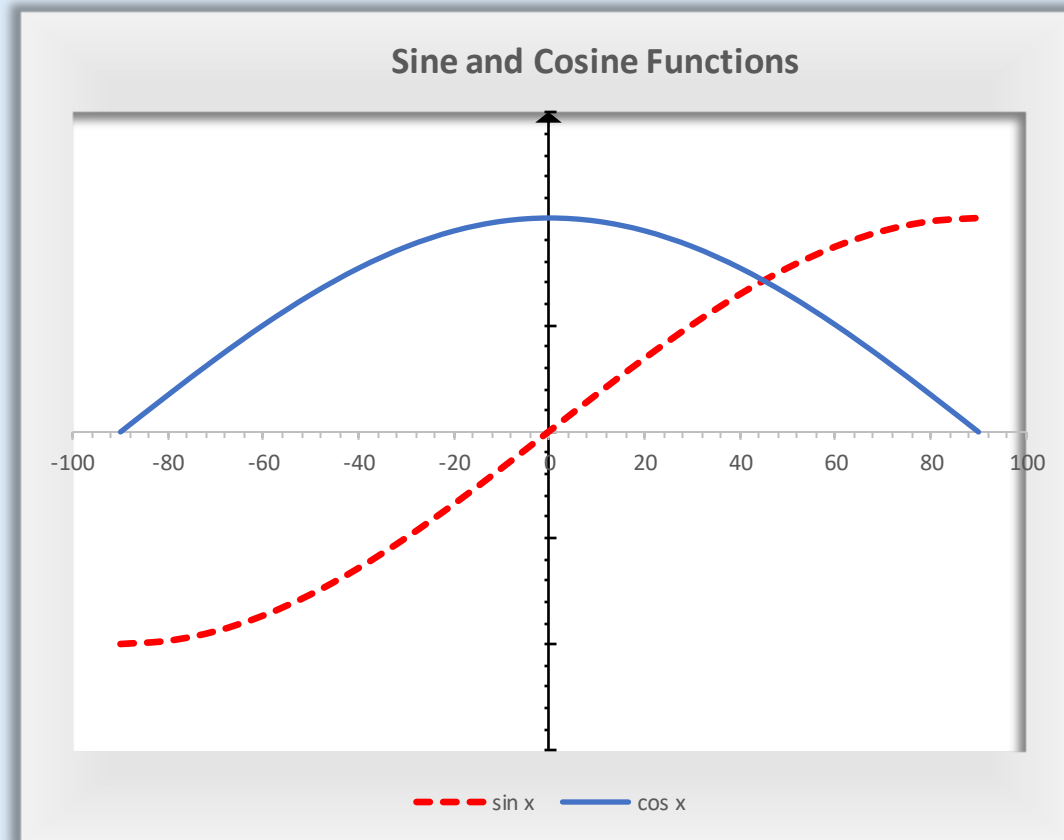


Fig. 16-13: Solution to Example 8(a).

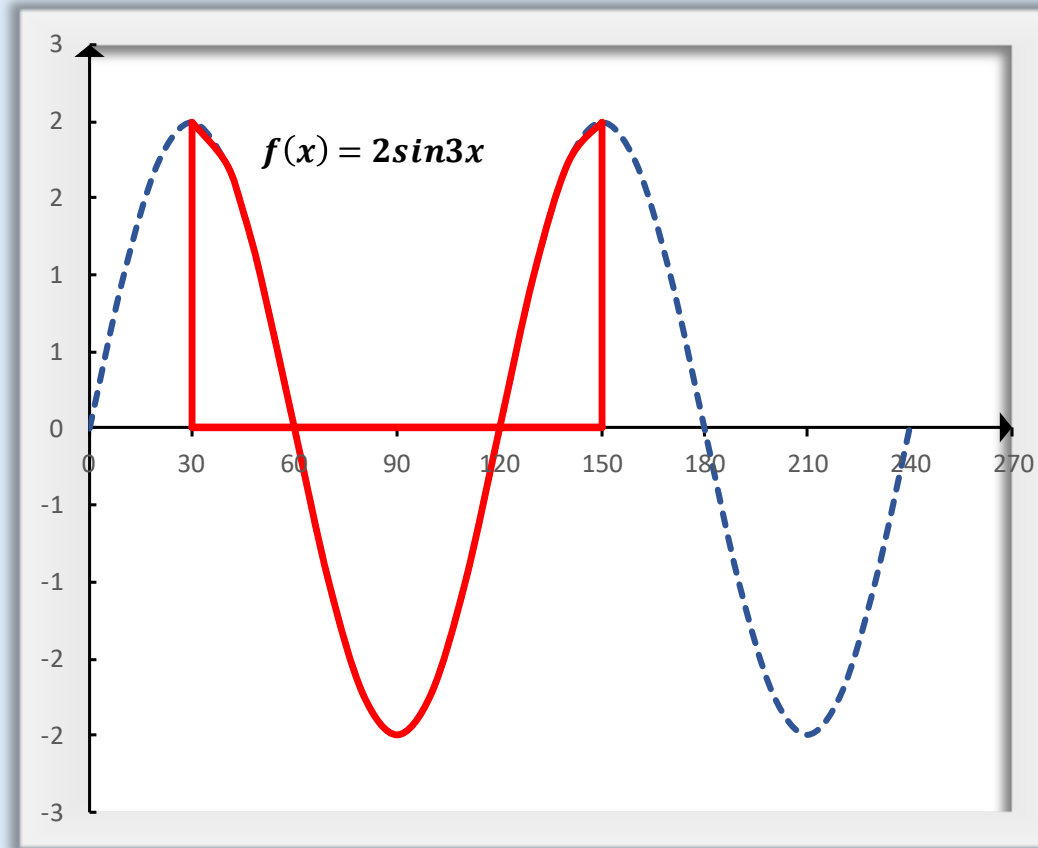


Fig. 16-14: Solution to Example 8(b).

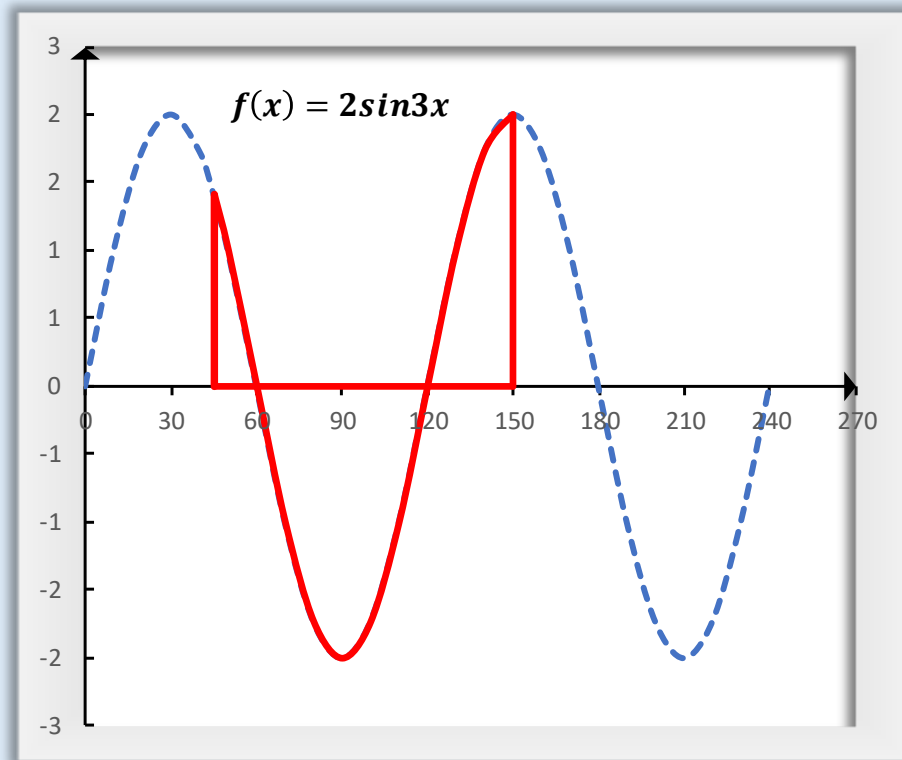


Fig. 16-15: Area bounded by a curve and a straight line illustrated.

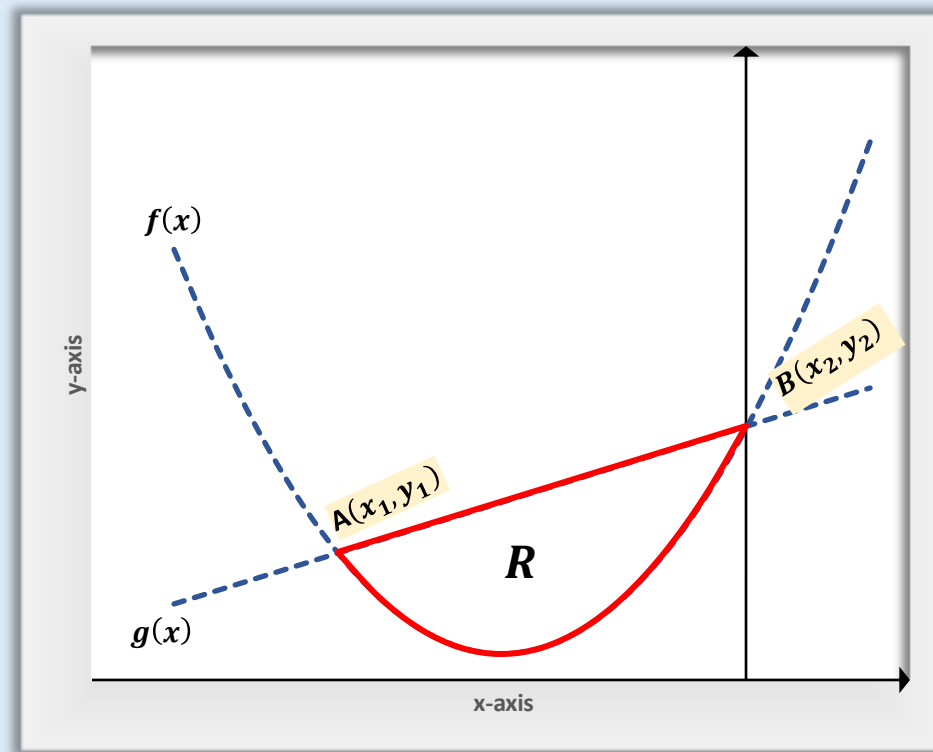


Fig. 16-16: Determining the area bounded by a curve and a straight line.

Area covered by the straight line

$$\int_{x_1}^{x_2} \{g(x)\} dx$$

minus

Area covered by the curve

$$\int_{x_1}^{x_2} \{f(x)\} dx$$

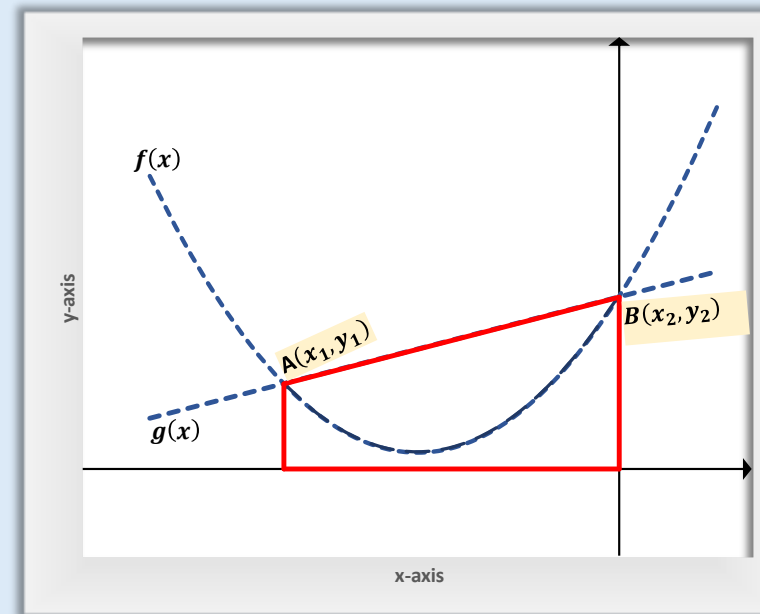
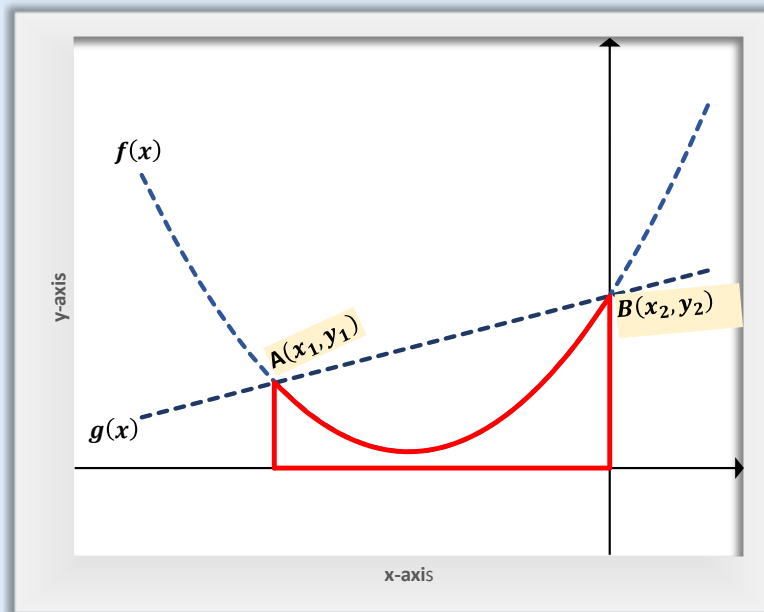


Fig. 16-17: Solution to Example 9.

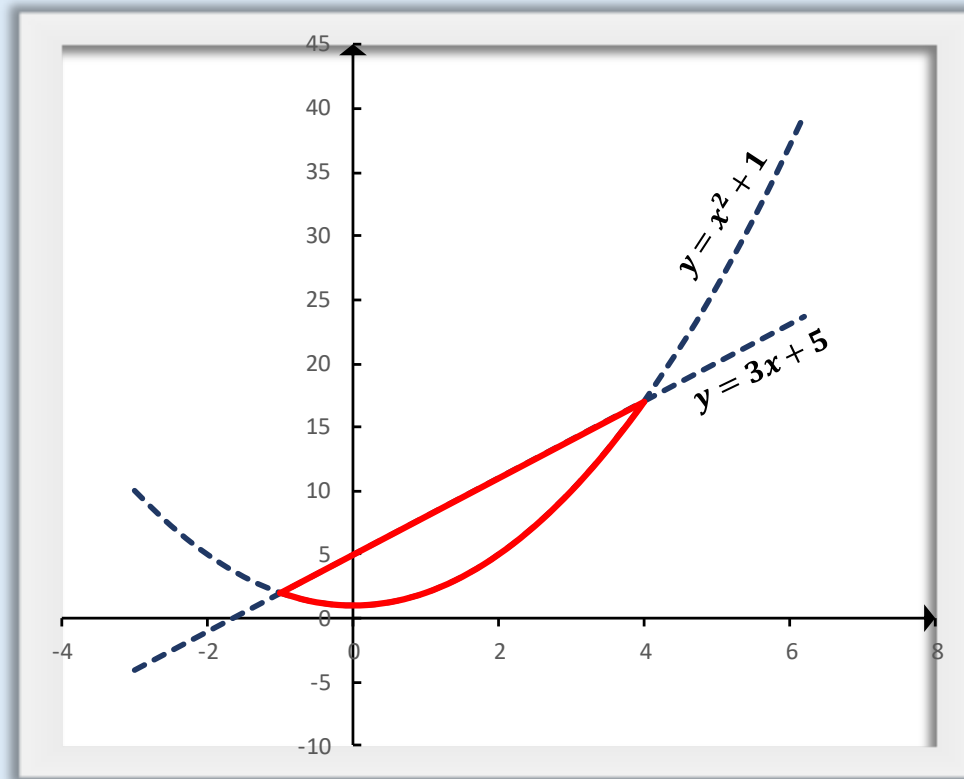


Fig. 16-18: Solution to Example 10.

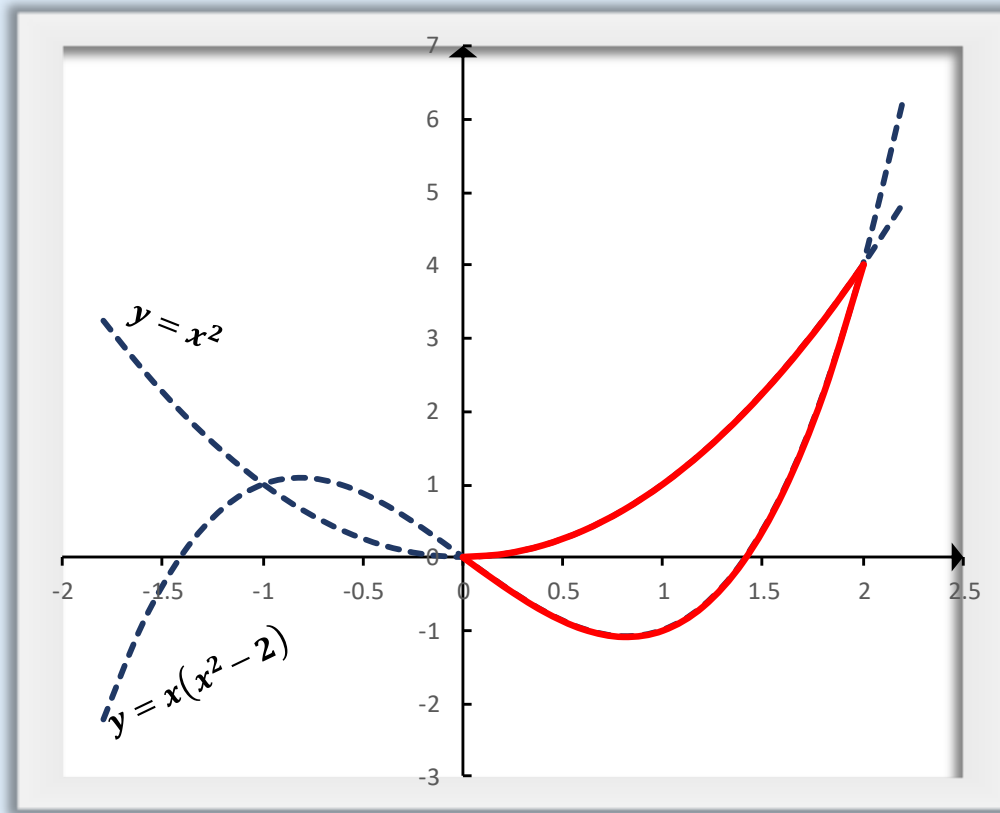
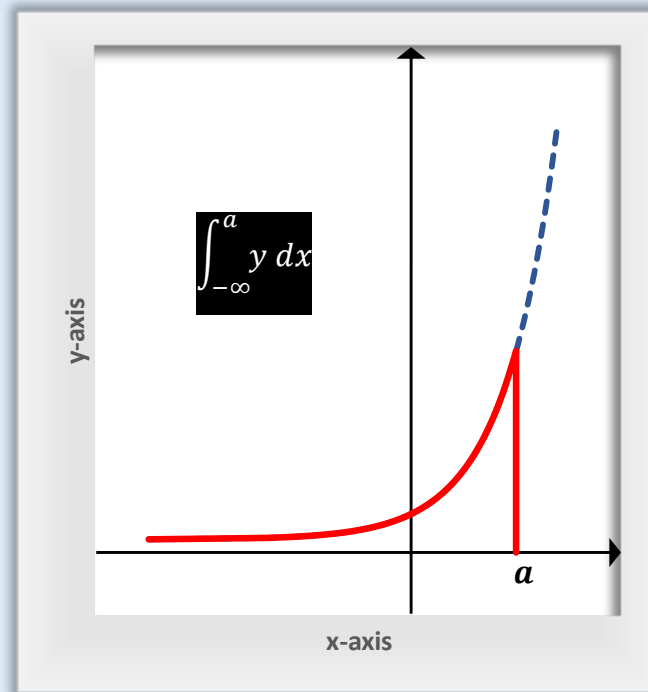
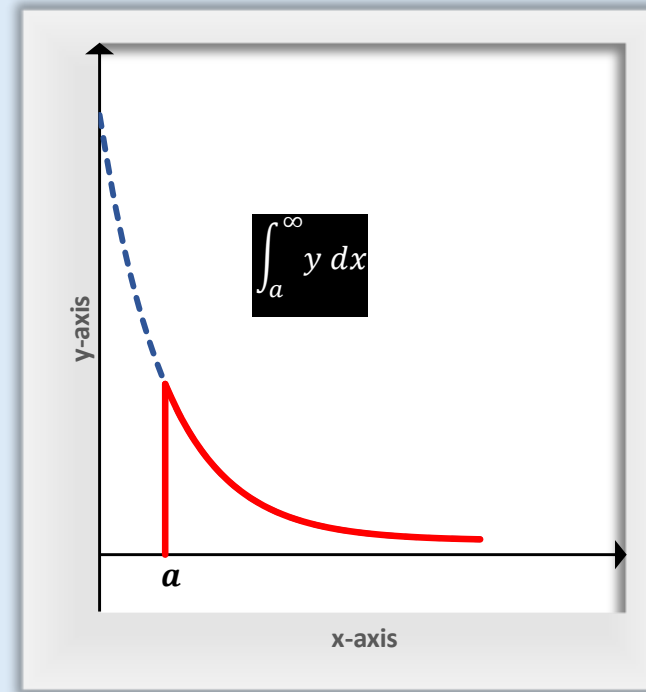


Fig. 16-19: Integrating to infinity illustrated: (a) from negative infinity to a given point, and (b) from a given point to positive infinity.



(a)



(b)



Thank You

