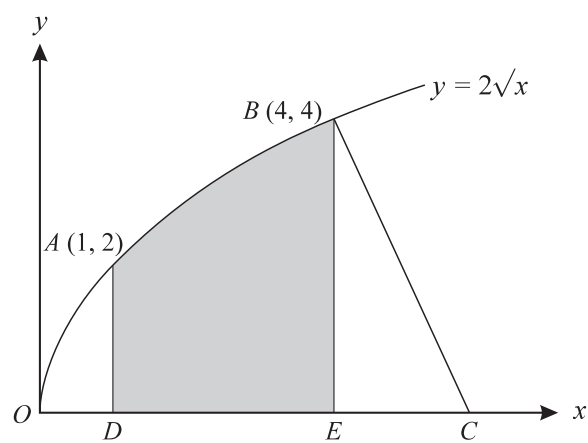


10



The diagram shows the points $A(1, 2)$ and $B(4, 4)$ on the curve $y = 2\sqrt{x}$. The line BC is the normal to the curve at B , and C lies on the x -axis. Lines AD and BE are perpendicular to the x -axis.

(i) Find the equation of the normal BC . [4]

(ii) Find the area of the shaded region. [4]