



The diagram shows a curve with equation  $y = 4x^{\frac{1}{2}} - 2x$  for  $x \geq 0$ , and a straight line with equation  $y = 3 - x$ . The curve crosses the  $x$ -axis at  $A(4, 0)$  and crosses the straight line at  $B$  and  $C$ .

- (a) Find, by calculation, the  $x$ -coordinates of  $B$  and  $C$ . [4]

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- (b) Show that  $B$  is a stationary point on the curve. [2]

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(c) Find the area of the shaded region. [6]

[6]

[illegible]