The diagram shows part of the curve with equation $y = \dfrac{4}{(2x-1)^2}$ and parts of the lines $x = 1$ and $y = 1$.

The curve passes through the points $A\,(1,\,4)$ and $B,\left(\frac{3}{2},\,1\right)$.

(a) Find the exact volume generated when the shaded region is rotated through $360°$ about the x-axis.

[5]

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(b) A triangle is formed from the tangent to the curve at B, the normal to the curve at B and the x-axis.

Find the area of this triangle. [6]

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