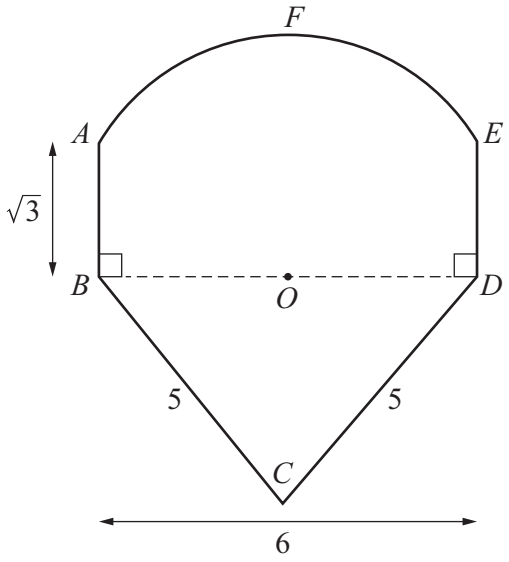
5 Given that $\log_a(p+1) + \dfrac{1}{\log_p a} - \log_a(p+2) + \log_a 5 = \log_a 12$, find the value of p. [5]

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6 In this question all lengths are in metres.



The diagram shows a shape $ABCDEF$.
AB, BD and DE are three sides of a rectangle.
O is the mid-point of BD.
AFE is an arc of a circle whose centre is O.
$AB = \sqrt{3}$, $BC = CD = 5$ and $BD = 6$.

(a) Find the exact value of the perimeter of the shape, giving your answer in terms of π. [5]

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