📄 18. Suppose that a typical consumer has an inverse demand for frog's legs given by the following:

$P = \dfrac{3}{Q^D}$. A graph of that inverse demand curve is given at right:

a. Show that the demand curve is unit-elastic.
b. If this customer came into your restaurant and asked for frog's legs, would you be better off charging a high price or a low price?
c. Show that the law of demand holds. (*Hint*: You will need to use calculus!)
d. Use calculus to determine the price elasticity of demand at a price of $2 and at a price of $4, and then relate your answers to part (a). (*Hint*: Fractional quantities are allowed.)