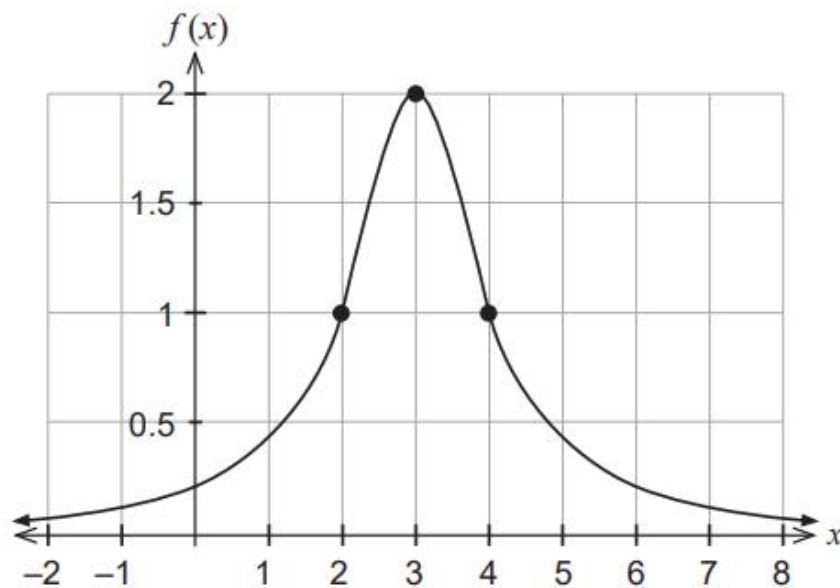


Question 15**(4 marks)**

The graph of a rational function f is shown below. Function f has the form $f(x) = \frac{k}{q(x)}$ with the following properties:

- f has no x intercepts or vertical asymptotes
- $f(x) \rightarrow 0$ for $|x| \rightarrow \infty$
- f is symmetric about $x = 3$
- function q is quadratic
- k is a constant.



Determine the defining rule for f .