

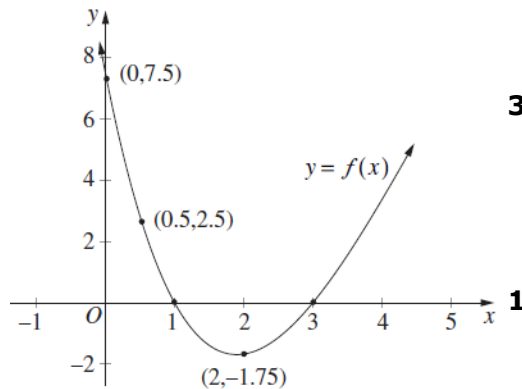
**MX 14** The diagram is a sketch of the graph of the function  
**SP c**  $y = f(x)$ .

(i) Sketch the graph of  $y = \frac{1}{|f(x)|}$ .

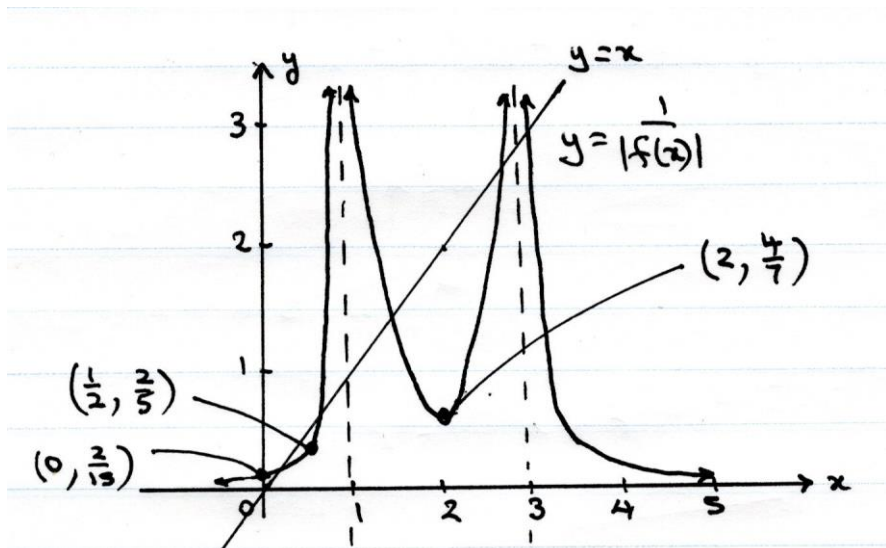
Your sketch should show any asymptotes and intercepts, together with the location of the points, corresponding to the labelled points on the original sketch.

(ii) How many solutions does the equation

$$\frac{1}{|f(x)|} = x \text{ have?}$$



(i)



(ii) Considering the points of intersection of  $y = x$  and  $y = \frac{1}{|f(x)|}$ , there are at least 5 solutions.

There could be more as it is not clear for  $x \rightarrow \pm \infty$ .

\* These solutions have been provided by [projectmaths](http://projectmaths.com.au) and are not supplied or endorsed by NESA.

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