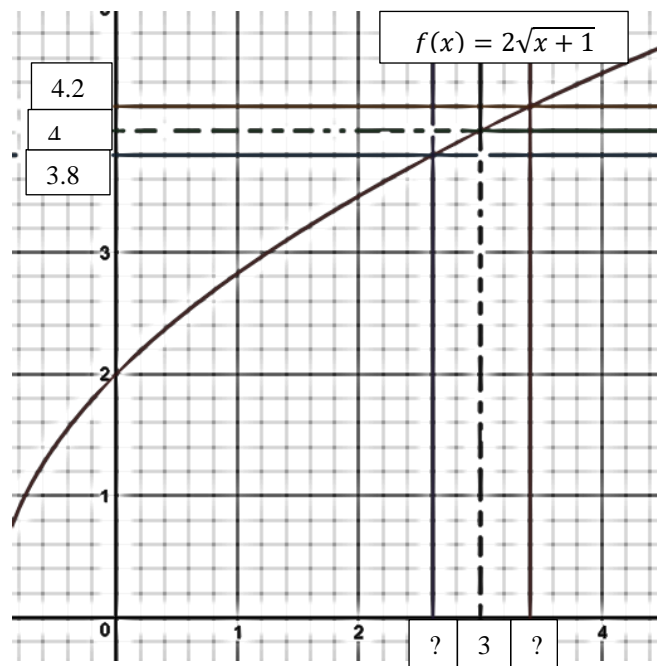


Name:

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**Question1:** Use the following graph to find a number  $\delta > 0$  such that:  
if  $|x - 3| < \delta$  then  $|f(x) - 4| < 0.2$ .



**Question2:** For what values of  $b$  is  $f(x) = \begin{cases} \frac{x-b}{b+1}, & x \leq 0 \\ x^2 + b, & x > 0 \end{cases}$  continuous at every  $x$ .

**Question3.** Find the horizontal asymptotes for  $f(x) = \frac{\sqrt{x^2+1}}{1-2x}$ .