

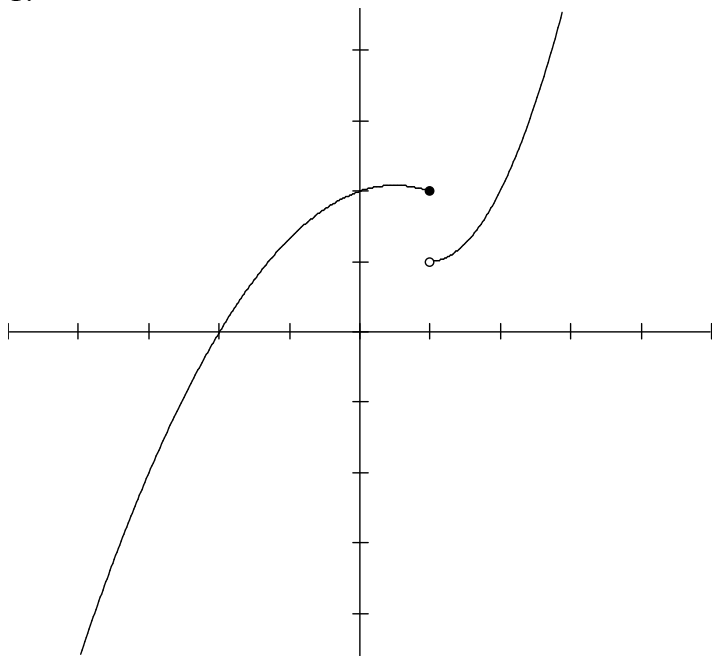
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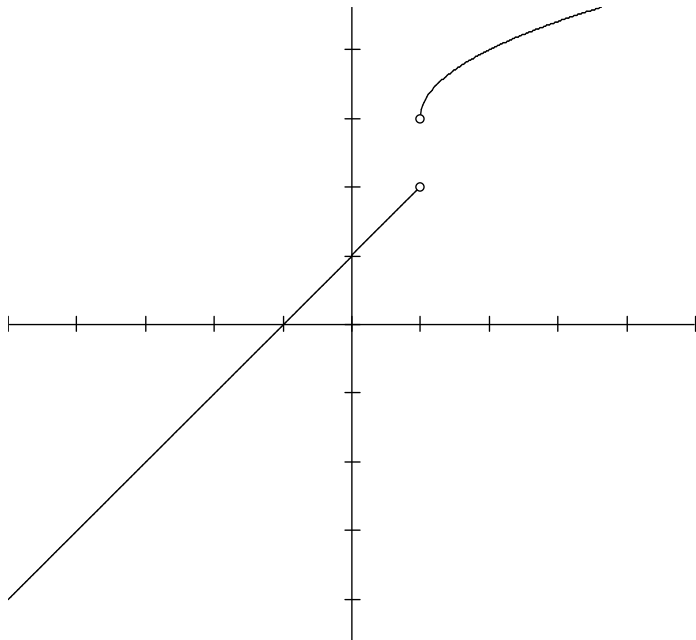
CONTINUITY WORKSHEET

1-3: Find any values of x for which each function is discontinuous. Give reason(s) for your answers using the definition of continuity.

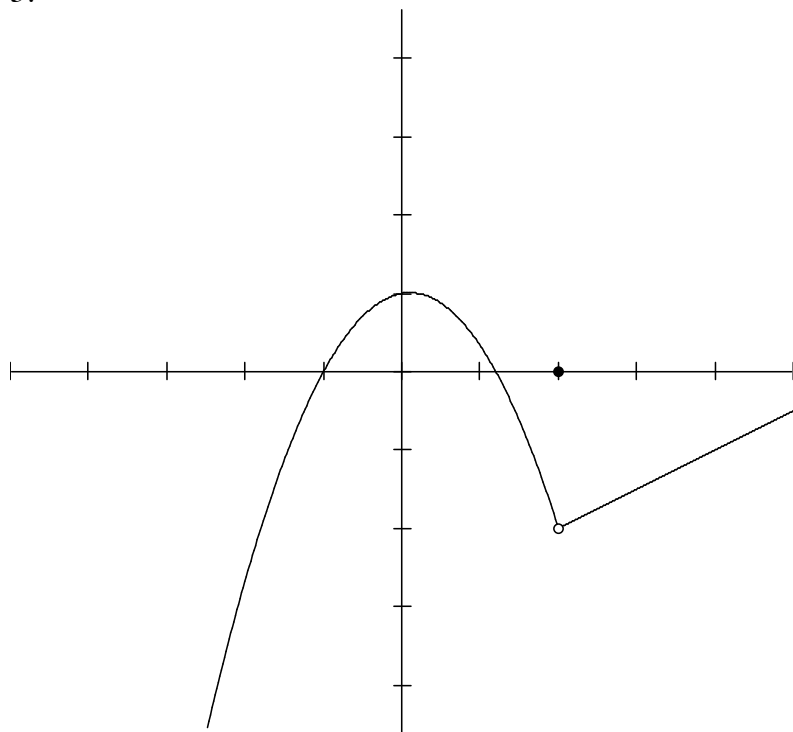
1.



2.



3.



4. Determine if the following function is continuous at $x = 3$. Show all steps and justify!!

$$f(x) = \begin{cases} \sqrt{x+13}, & \text{if } x \geq 3 \\ x^2 - 5, & \text{if } x < 3 \end{cases}$$

5. Find the value of k so that the following function is continuous at $x = 3$. Show your work!!

$$f(x) = \begin{cases} x^2 - 1, & \text{if } x < 3 \\ 2kx, & \text{if } x \geq 3 \end{cases}$$