

14.2, number 33: **Where is  $g(x, y) = \sin \frac{1}{xy}$  continuous?**

**Answer:** The function  $g(x, y)$  is continuous wherever it is defined. The function is defined whenever  $xy \neq 0$ .

The function  $g(x, y)$  is not continuous on the  $x$ -axis;  $g(x, y)$  is not continuous on the  $y$ -axis; but  $g(x, y)$  is continuous everywhere else on the  $xy$ -plane.