▶ **Review 0-14** With a proof by contradiction, show that there exists no largest negative rational number.

Proof. Suppose, to the contrary, that $-\frac{x}{y}$ is the largest negative rational number, where x and y are positive integers. Then $\frac{x}{2y}$ is a positive rational number and $\frac{x}{2y} < \frac{x}{y}$. So $-\frac{x}{2y} > -\frac{x}{y}$, a contradiction. □