首先，要证明的结论是：

任取 $\varepsilon>0$，存在 $\delta>0$，使得当 $0<|x-x_0|<\delta$ 时，有

$$\left|\frac{1}{g(x)}-\frac{1}{B}\right|\left|\frac{1}{g(x)}-\frac{1}{B}\right|<\varepsilon \tag{1}$$

$$|\frac{1}{g(x)}-\frac{1}{B}||\frac{1}{2}||\tfrac{1}{2}| \tag{2}$$

$$\bigl|\frac{1}{g(x)}-\frac{1}{B}\bigr|\bigl|\frac{1}{2}\bigr|\bigl|\tfrac{1}{2}\bigr| \tag{3}$$

$$\Bigl|\frac{1}{g(x)}-\frac{1}{B}\Bigr|\Bigl|\frac{1}{2}\Bigr|\Bigl|\tfrac{1}{2}\Bigr| \tag{4}$$

$$\biggl|\frac{1}{g(x)}-\frac{1}{B}\biggr|\biggl|\frac{1}{2}\biggr|\biggl|\tfrac{1}{2}\biggr| \tag{5}$$

式(1)可化为：

$$\frac{|g(x)-B|}{|B|\,|g(x)|} \tag{6}$$

绝对值符号 $|\boldsymbol{a}|=\sqrt{x_1^2+y_1^2}$ $\quad |\overrightarrow{AB}|=\sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$

$\left|\overrightarrow{AB}\right|$ $|\overrightarrow{AB}|$ $\bigl|\overrightarrow{AB}\bigr|$ $\Bigl|\overrightarrow{AB}\Bigr|$ $\biggl|\overrightarrow{AB}\biggr|$ $\Biggl|\overrightarrow{AB}\Biggr|$

$|\tfrac{1}{2}||\frac{1}{2}||\dfrac{1}{2}|$ $\bigl|\tfrac{1}{2}\bigr|\bigl|\frac{1}{2}\bigr|\bigl|\dfrac{1}{2}\bigr|$ $\Bigl|\tfrac{1}{2}\Bigr|\Bigl|\frac{1}{2}\Bigr|\Bigl|\dfrac{1}{2}\Bigr|$ $\biggl|\tfrac{1}{2}\biggr|\biggl|\frac{1}{2}\biggr|\biggl|\dfrac{1}{2}\biggr|$

最佳方案：$\left|\tfrac{1}{2}\right|\left|\frac{1}{2}\right|\left|\dfrac{1}{2}\right|$

更多验证：$\left|\tfrac{1}{f(x)}\right|\left|\frac{1}{f(x)}\right|\left|\dfrac{1}{f(x)}\right|$

继续验证：$\left|\tfrac{g(x)}{f(x)}\right|\left|\frac{g(x)}{f(x)}\right|\left|\dfrac{g(x)}{f(x)}\right|$

更多验证：$\left|\tfrac{1}{f(x)}\right|$ $\bigl|\tfrac{1}{f(x)}\bigr|$ $\left|\frac{1}{f(x)}\right|$ $\bigl|\frac{1}{f(x)}\bigr|$ $\left|\dfrac{1}{f(x)}\right|$ $\biggl|\dfrac{1}{f(x)}\biggr|$

继续验证：$\left|\tfrac{g(x)}{f(x)}\right|$ $\bigl|\tfrac{g(x)}{f(x)}\bigr|$ $\left|\frac{g(x)}{f(x)}\right|$ $\bigl|\frac{g(x)}{f(x)}\bigr|$ $\left|\dfrac{g(x)}{f(x)}\right|$ $\biggl|\dfrac{g(x)}{f(x)}\biggr|$