



$$\frac{\partial f}{\partial a} = ? \quad \frac{\partial f}{\partial b} = ? \quad \frac{\partial f}{\partial c} = ?$$

$$(1) \frac{\partial f}{\partial f} = 1$$

$$(2) \frac{\partial f}{\partial (\frac{2}{x})} = \frac{\partial f}{\partial f} \cdot \frac{\partial f}{\partial (\frac{2}{x})} = 1 \cdot \frac{-2}{x^2} \rightarrow 1 \cdot \frac{-2}{2^2} = -\frac{1}{2}$$

$$(3) \frac{\partial f}{\partial (x)} = \frac{\partial f}{\partial (\frac{2}{x})} \cdot \frac{\partial (\frac{2}{x})}{\partial (x)} \quad \begin{cases} -\frac{1}{2} \cdot \frac{1}{2} = -\frac{1}{4} \\ -\frac{1}{2} \cdot 4 = -2 \end{cases}$$

$$(4) \frac{\partial f}{\partial (x^2)} = \frac{\partial f}{\partial (x)} \cdot \frac{\partial (x)}{\partial (x^2)} = -\frac{1}{4} \cdot 2x \rightarrow -\frac{1}{4} \cdot 2 \cdot 2 = \boxed{-1 = \frac{\partial f}{\partial a}}$$

$$(5) \frac{\partial f}{\partial (\frac{7}{2x})} = \frac{\partial f}{\partial (x)} \cdot \frac{\partial (x)}{\partial (\frac{7}{2x})} = (-2) \cdot \frac{-7}{2x^2} \rightarrow (-2) \cdot \frac{-7}{2 \cdot 7^2} = \frac{1}{7}$$

$$(6) \frac{\partial f}{\partial (x+1)} = \frac{\partial f}{\partial (\frac{7}{2x})} \cdot \frac{\partial (\frac{7}{2x})}{\partial (x+1)} = \frac{1}{7} \cdot 1 = \boxed{\frac{1}{7} = \frac{\partial f}{\partial b} = \frac{\partial f}{\partial c}}$$