$$
r:=x \rightarrow \frac{(x+4)^{3}}{(x-4)^{3}}
$$

$$
\begin{equation*}
r:=x \mapsto \frac{(x+4)^{3}}{(x-4)^{3}} \tag{1}
\end{equation*}
$$

$r p:=\mathrm{D}(r)$

$$
\begin{equation*}
r p:=x \mapsto \frac{3 \cdot(x+4)^{2}}{(x-4)^{3}}-\frac{3 \cdot(x+4)^{3}}{(x-4)^{4}} \tag{2}
\end{equation*}
$$

$r p p:=\mathrm{D}(r p)$

$$
\begin{equation*}
r p p:=x \mapsto \frac{6 \cdot(x+4)}{(x-4)^{3}}-\frac{18 \cdot(x+4)^{2}}{(x-4)^{4}}+\frac{12 \cdot(x+4)^{3}}{(x-4)^{5}} \tag{3}
\end{equation*}
$$

solve $(\operatorname{rpp}(x)=0)$

$$
\begin{equation*}
-12,-4 \tag{4}
\end{equation*}
$$

simplify $(r p p(x))$

$$
\begin{equation*}
\frac{48(x+4)(x+12)}{(x-4)^{5}} \tag{5}
\end{equation*}
$$

simplify $(r p(x))$

$$
\begin{equation*}
-\frac{24(x+4)^{2}}{(x-4)^{4}} \tag{6}
\end{equation*}
$$

