21. $f(x) = \frac{e^x}{x^2}$ $\quad P = e^x \quad P' = e^x$, $Q = x^2 \quad Q' = 2x$

$= e^x x^{-2}$

$\frac{P'Q - PQ'}{Q^2}$

$f'(x) = \frac{e^x(x^2) - e^x(2x)}{(x^2)^2}$

$= \frac{x e^x (x-2)}{x^4}$

$= \frac{e^x(x-2)}{x^3}$ $\quad P = e^x(x-2)$, $Q = x^3$

$P = \underbrace{e^x}_{u}\underbrace{(x-2)}_{v}$

$u' = e^x \quad v' = 1$

$u'v - uv'$

$P' = e^x(x-2) - e^x(1)$

$= e^x(x-2-1)$

$P' = e^x(x-3) \quad Q' = 3x^2$

$P = e^x(x-2) \quad Q = x^3$

$\frac{P'Q - PQ'}{Q^2}$

$f''(x) = \frac{e^x(x-3)x^3 - e^x(x-2)\cdot 3x^2}{(x^3)^2}$

$= \frac{x^2 e^x [x(x-3) - 3(x-2)]}{x^6}$

$= \frac{e^x [x^2 - 3x - 3x + 6]}{x^4}$

$= \boxed{\frac{e^x(x^2 - 6x + 6)}{x^4}}$