667 - - Teremos:

$$y' = 8x^7 + 42x^5 - 5$$

$$y'' = 56x^6 + 210x^4$$

668 - - Teremos:

$$y' = e^{x^2} \cdot 2x$$

$$y'' = 2e^{x^2} + 4x^2 e^{x^2}$$

669 - - Teremos:

$$y' = 2 \cdot \operatorname{sen}(x) \cdot \cos(x)$$

$$y'' = 2 \cdot \cos^2(x) - 2 \cdot \operatorname{sen}^2(x) = 2 \cdot \cos(2x)$$

670 - - Teremos:

$$y' = \frac{1}{\sqrt[3]{1+x^2}} \cdot \frac{1}{3} \cdot \frac{1}{\sqrt[3]{(1+x^2)^2}} \cdot 2x$$

$$y' = \frac{1}{3} \cdot \frac{2x}{(1+x^2)}$$

$$y'' = \frac{1}{3}\left[2(1+x^2) - 2x \cdot 2x\right] \cdot \frac{1}{(1+x)^2}$$

$$y'' = \frac{1}{3} \cdot \frac{2-2x^2}{(1+x^2)^2} = \frac{2}{3} \cdot \frac{1-x^2}{(1+x^2)^2}$$

671 - - Teremos:

$$y' = \frac{1}{(x+\sqrt{a^2+x^2})} \cdot \left(1 + \frac{1}{2} \cdot \frac{1}{\sqrt{a^2+x^2}} \cdot 2x\right)$$

$$y' = \frac{1}{(x+\sqrt{a^2+x^2})} \cdot \left(1 + \frac{x}{\sqrt{a^2+x^2}}\right)$$

$$y' = \frac{(\sqrt{a^2+x^2}+x)}{(x+\sqrt{a^2+x^2})} \cdot \frac{1}{\sqrt{a^2+x^2}} = \frac{1}{\sqrt{a^2+x^2}}$$

$$y'' = -\frac{x}{\sqrt{(a^2+x^2)^3}}$$

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