№15. $y = (\sin\sqrt{x})^{\ln\sin\sqrt{x}}$

$(\ln y)' = \left(\ln(\sin\sqrt{x})^{\ln\sin\sqrt{x}}\right)'$

$\frac{y'}{y} = (\ln\sin\sqrt{x})^2$; $\frac{y'}{y} = \ln\sin\sqrt{x} \cdot \frac{1}{\sin\sqrt{x}} \cdot \cos\sqrt{x} \cdot \frac{1}{2\sqrt{x}}$

$y' = y\left(\frac{\cos\sqrt{x}\ln\sin\sqrt{x}}{\sqrt{x}\sin\sqrt{x}}\right) = y\left(\frac{ctg\sqrt{x}\cdot\ln\sin\sqrt{x}}{\sqrt{x}}\right)$

$y' = \frac{(\sin\sqrt{x})^{\ln\sin\sqrt{x}} \cdot ctg\sqrt{x}\cdot\ln\sin\sqrt{x}}{\sqrt{x}}$