

Bemerkung 2.2: Lösung mit Maple und Mathematica

Maple



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C:\Dokumente und Einstellungen\arnold\Eigene Dateien\home\vorlesung\2004\Wis04.m2\mw\dglsep.mw
File Edit View Insert Format Tools Window Help
C Maple Input Monospaced 36 B I U
> dsolve ( diff (y(x),x) = tan(x) * ( y(x)^2 - 1 ) );
      y(x) = -tanh(-ln(cos(x)) + _C1)
> dsolve ( { diff (y(x),x) = tan(x) * ( y(x)^2 - 1 ) , y(0)=0 } );
      y(x) = (cos(x)^2 - 1) / (cos(x)^2 + 1)
Ready | Time: 0.39s | Memory: 0.18M
```

Mathematica



```
dglsep.nb
In[1]:= DSolve [ y' [x] == Tan[x] * (y[x]^2 - 1), y[x], x ]
Out[1]= {{y[x] -> (-1 - e^{2 C[1]} Sec[x]^2) / (-1 + e^{2 C[1]} Sec[x]^2)}}
In[2]:= DSolve [ { y' [x] == Tan[x] * (y[x]^2 - 1), y[0] == 0 }, y[x], x ]
Solve::ifun : Inverse functions are being used by Solve, so some solutions
may not be found; use Reduce for complete solution information. Mehr...
Out[2]= {{y[x] -> (1 - Sec[x]^2) / (1 + Sec[x]^2)}}
100%
```

