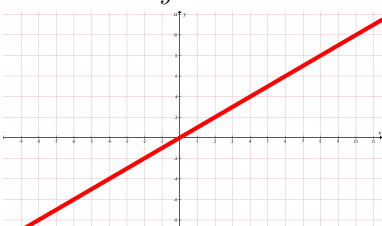
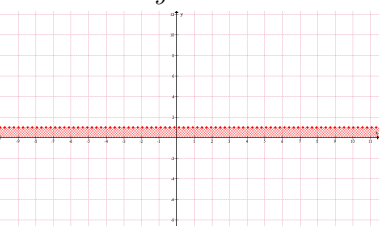
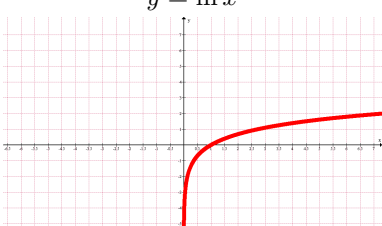
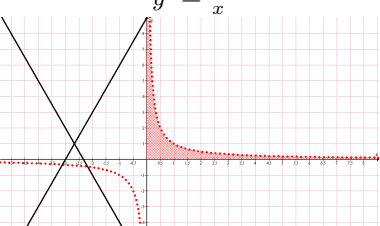
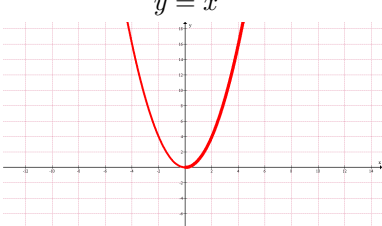
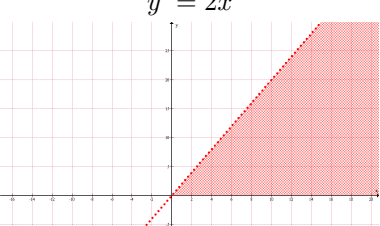
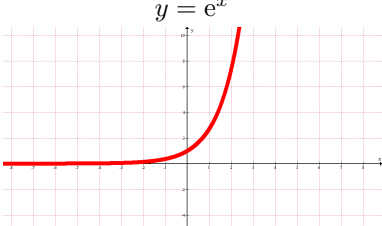
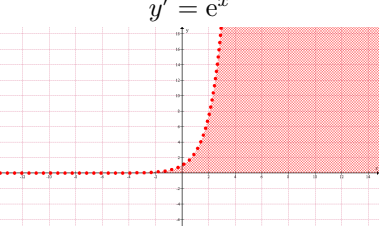


## JAK ČTEME Z PRVNÍ DERIVACE

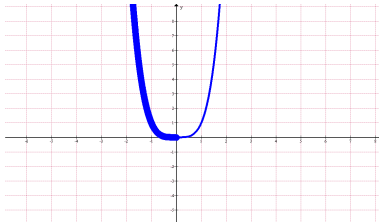
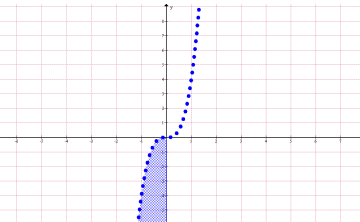
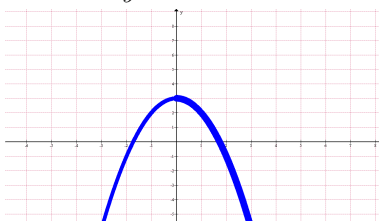
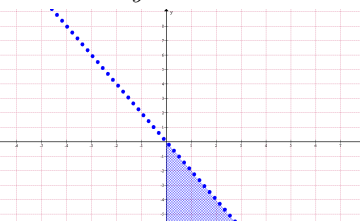
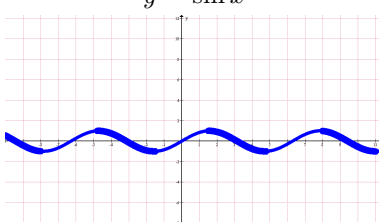
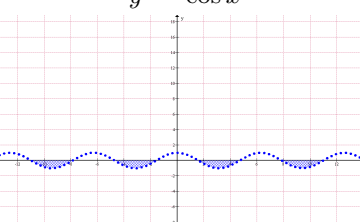
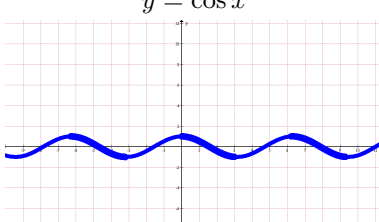
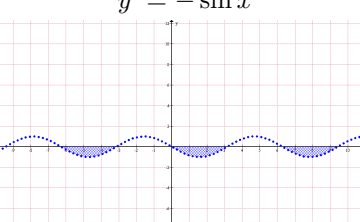
Tabulka 1 ukazuje rostoucí funkce, popř. jsou zvýrazněny intervaly, na kterých je průběh dané funkce rostoucí. Jak se na intervalech, kde je původní funkce rostoucí, chová první derivace? Funkční hodnoty jsou kladné – tj. nad osou  $x$ . U klesajících intervalů je tomu naopak, jak ukazuje Tabulka 2.

TABULKA 1. Rostoucí intervaly

Zadaná funkce	$\Rightarrow$	První derivace
$y = x$ 	$\Rightarrow$	$y' = 1$ 
$y = \ln x$ 	$\Rightarrow$	$y' = \frac{1}{x}$ 
$y = x^2$ 	$\Rightarrow$	$y' = 2x$ 
$y = e^x$ 	$\Rightarrow$	$y' = e^x$ 

Zdroj: program Graph

TABULKA 2. Klesající intervaly

Zadaná funkce	⇒	První derivace
$y = x^4$ 	⇒	$y' = 4x^3$ 
$y = -x^2 + 3$ 	⇒	$y' = -2x$ 
$y = \sin x$ 	⇒	$y' = \cos x$ 
$y = \cos x$ 	⇒	$y' = -\sin x$ 

Zdroj: program Graph