

Math 180 - Test #2 Formula Exercises

Fall 2017, Prof. Beydler

This sheet is designed to help you practice remembering some of your derivatives and formulas.

$$\frac{d}{dx}(c) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(x^n) = \underline{\hspace{2cm}}$$

$$(fg)' = \underline{\hspace{2cm}}$$

$$\left(\frac{f}{g}\right)' = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\sin x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\cos x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\tan x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\sec x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\cot x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\csc x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\sin^{-1} x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\cos^{-1} x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\tan^{-1} x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(e^x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(a^x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\ln x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\log_a x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\sinh x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\cosh x) = \underline{\hspace{2cm}}$$

$$\frac{d}{dx}(\tanh x) = \underline{\hspace{2cm}}$$

$$\sinh x = \underline{\hspace{2cm}}$$

$$\cosh x = \underline{\hspace{2cm}}$$

$$\tanh x = \underline{\hspace{2cm}}$$

$$\coth x = \underline{\hspace{2cm}}$$

$$\operatorname{sech} x = \underline{\hspace{2cm}}$$

$$\operatorname{csch} x = \underline{\hspace{2cm}}$$

For those related rates problems:

Distance/rate/time formula: $d = \underline{\hspace{2cm}}$

Area of rectangle with sides l and w : $A = \underline{\hspace{2cm}}$

Area of circle with radius r : $A = \underline{\hspace{2cm}}$

Area of triangle with base b and height h : $A = \underline{\hspace{2cm}}$

Circumference of circle with radius r : $C = \underline{\hspace{2cm}}$

Volume of a box with dimensions l , w , and h : $V = \underline{\hspace{2cm}}$

Volume of circular cylinder with base radius r and height h : $V = \underline{\hspace{2cm}}$

Surface area of sphere with radius r : $S = \underline{\hspace{2cm}}$

Volume of sphere with radius r : $V = \underline{\hspace{2cm}}$

Volume of cone with base radius r and height h : $V = \underline{\hspace{2cm}}$