

BASIC DIFFERENTIATION FORMULAS

Fill in each of the following with the appropriate formula.

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

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

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

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

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

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

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

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

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

10. $\frac{d}{dx}(\arcsin x) = \underline{\hspace{2cm}}$

11. $\frac{d}{dx}(\arctan x) = \underline{\hspace{2cm}}$

12. $\frac{d}{dx}(\arccos x) = \underline{\hspace{2cm}}$

BASIC INTEGRATION FORMULAS

Fill in each of the following with the appropriate formula.

1. $\int dx =$ _____

2. $\int e^x dx =$ _____

3. $\int \frac{1}{x} dx =$ _____

4. $\int \sin x dx =$ _____

5. $\int \cos x dx =$ _____

6. $\int \sec^2 x dx =$ _____

7. $\int \sec x \tan x dx =$ _____

8. $\int \csc x \cot x dx =$ _____

9. $\int \csc^2 x dx =$ _____

10. $\int \frac{dx}{\sqrt{1-x^2}} =$ _____

11. $\int \frac{dx}{1+x^2} =$ _____

12. $\int \frac{-1}{\sqrt{1-x^2}} dx =$ _____