

Review of AP Calc BC topics needed for Honors Calc3/DiffEq...

Self-assessment quiz – try these problems and check answers. If you need to review use the review videos in Schoology ‘announcement’ area below the weekly schedule.

Finding Derivatives

#1.  $\frac{d}{dx}[x^7] =$

#2.  $\frac{d}{dx}[e^x] =$

#3.  $\frac{d}{dx}[\sin x] =$

#4.  $\frac{d}{dx}[\tan x] =$

#5.  $\frac{d}{dx}[\cos(x^3)] =$

#6.  $\frac{d}{dx}[e^{x^4}] =$

#7.  $\frac{d}{dx}[x^2 \ln x] =$

#8.  $\frac{d}{dx}\left[\frac{\sec x}{x^3}\right] =$

**Evaluating Integrals**

#9.  $\int \sin x \, dx =$

#10.  $\int x^3 \, dx =$

#11.  $\int e^x \, dx =$

#12.  $\int \frac{1}{1+x^2} \, dx =$

#13.  $\int \frac{1}{x} \, dx =$

#14.  $\int \frac{1}{2x-1} \, dx =$

#15.  $\int 3x^2 e^{x^3} \, dx =$

#16.  $\int x\sqrt{3x^2-4} \, dx =$

$$\#17. \int x \ln(x) dx =$$

$$\#18. \int x \cos(x) dx =$$

$$\#19. \int \frac{1}{x^2 + 3x - 10} dx =$$

$$\#20. \int \frac{1}{x^2 + 4x + 11} dx =$$

$$\#21. \int_3^4 \frac{1}{x-2} dx =$$

$$\#22. \int_1^4 e^{2x} dx =$$