

Calculus:

Homework

1/2-1/5

due: Wednesday: read pp. 328-332

pg. 402 / #1-12

Thursday: read pp. 405-406

Evaluate: a.  $\int 28(7x - 2)^3 dx$     c.  $\int \frac{x^2 dx}{\sqrt{1-x^3}}$     e.  $\int (x^2 + 7)^2 dx$   
b.  $\int 5x^3(x^4 - 1)^2 dx$     d.  $\int (x^4 + 4x^2 + 1)^7(x^3 + 2x) dx$

Friday:

1. pp. 402-403 / #13, 15, 17, 20, 21, 22, 23, 24

2. Evaluate:  $\int (\sin^2 x + \cos^2 x) dx$

Monday: read pp. 332-334

1. Pg. 340 / #26, 29, 39

2. Find the general solution of each differential equation:

a.  $\frac{dy}{dx} = 5 - 3x$     b.  $\frac{dy}{dx} = x(x^2 - 1)^4$

3. If a function has the properties  $f'(x) = 4x + 1$  and  $f(1) = 3$ , find  $f(2)$ .

4. If  $\frac{dy}{dx} = 3x^2$  and  $y = 3$  when  $x = 2$ , find  $y$  when  $x = 3$ .