P. Staley	1
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M250

name:

Southwestern College

Practice Exam 3.7-4.2

Show your work on this exam. CIRCLE YOUR ANSWERS. Be neat.

1. Use three iterations of Newton's method to find x such that $x^3+x^2=11$. Start with $x_0=2$. Show all the intermediate results.

2. Use the Midpoint Rule with n=4 to approximate

the area under $y = x^3$ for 1 < x < 3

3. State the definition for the indefinite integral.

4. Determine the dimensions (height and radius) of a cylindrical soup can that contains a volume of 10 cubic inches and uses a minimum amount of metal.

5. practice:	
$\int x^n dx =$	
$\int \sin(x)dx =$	
$\int \cos(x)dx =$	
$\frac{d}{dx}x^n =$	
$\frac{d}{d\theta}\sin(\theta) =$	
$\frac{d}{dt}\cos(t) =$	
$\frac{d}{dy}\tan(y) =$	
$\frac{d}{dx}\operatorname{sec}(x) =$	
$d(x^n) =$	
$d(\sin(\theta)) =$	-
$d(\cos(t)) =$	
d(tan(y)) =	
d(sec(x)) =	