

AMS 161-Practice Midterm 2-Spring 2018

NAME: _____

*Compute each of the following: (10 point each)

a) $\int x \cos(2x) dx$.

b) $\int \frac{1}{x^2+5x} dx$

c) $F(3)$ if $F(x) = \int_0^x (|t| - 4) dt$

d) $\int x^2 e^x dx$

e) $\int \ln(7x - 1) dx$

f) $\int_2^{\infty} \frac{4}{5x^3} dx$

g) $\int \cos 5x \sqrt{\sin 5x} dx$

h) $G'(3)$ if $G(x) = \int_2^x \frac{1}{\ln t} dt$

i) $y(2)$ if $\frac{dy}{dx} = -\frac{y}{3}$

j) the area under $y = \sqrt{1-x^2} + x^2 + 1$