

Name _____

MATH 172

Quiz 1 Spring 2018

Sections 501-502 (circle one)

P. Yasskin

1	/4	3	/4
2	/6	4	/6
		Total	/20

1. Find the mass of a 5 cm bar with linear density $\rho(x) = x^3 \frac{\text{gm}}{\text{cm}}$ where x is measured from one end.

2. Find the center of mass of a 5 cm bar with linear density $\rho = x^3 \frac{\text{gm}}{\text{cm}}$ where x is measured from one end.

3. Complete each of these identities.

The first two are in terms of $\sin(A)$, $\cos(A)$, $\sin(B)$ and/or $\cos(B)$:

a. $\sin(A + B) =$

b. $\cos(A + B) =$

The last two are in terms of $\sin(2A)$ and/or $\cos(2A)$:

c. $\sin^2(A) =$

d. $\cos^2(A) =$

4. Compute: $\int x^5 \ln x dx$. Check your answer.