

Due date: \_\_\_\_\_

Name: \_\_\_\_\_

1. Use Newton's method to estimate the negative root of  $e^x = x^2 - 2$  correct to six decimal places. Start with  $x_1 = -1.5$ .

2. Use Newton's method to estimate the root of  $x^3 = x + 1$  correct to six decimal places. Start with  $x_1 = 1.5$ .

3. Use Newton's method to estimate the root of  $\cos x = x$  correct to six decimal places. Start with  $x_1 = 1$ . (Note:  $x$  is in radians when inputting into  $\cos x$ .)

Q: What is the center of Gravity?

Optional exercises from the Stewart textbook if you'd like more practice:  
4.8 (p.348) #7, 15-21 odd