

Math 2311

Section Homework 1 (Sections 1.4 & 1.7)

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Directions:

- Homework will NOT be accepted through email or in person. Homework must be submitted through Canvas (see syllabus for details).
- Please write the unit complete for problems.
- Use Newton's method for all problems.
- Write your solutions in the space provided. The unit does all work for full credit.
- Submit all assignments at <https://canvas.utdallas.edu> under "assignments" and show full.

Q. 1. Section 1.4 Problem 4
 250 350 450 475 485 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000

$$Q1: (25)(10) + 5 = 45, \quad Q1 = (450 + 445)/2 = 447.5$$

$$Q2: (35)(10) + 5 = 85, \quad Q2 = (447.5 + 445)/2 = 446.25$$

$$Q3: (45)(10) + 5 = 125, \quad Q3 = (446.25 + 445)/2 = 445.625$$

$$\text{Error} = 450 - 445 = 5$$

$$Q4 = 450 - 447.5 = 2.5$$

$$F = \text{Funct}(x) = 0.1 \cdot 250.0 + 0.1 \cdot 447.5 + 0.1 \cdot 446.25 + 0.1 \cdot 445.625 + 0.1 \cdot 445.0$$

$$Q1 = 1/5(250) + 4/5(445) = 445.2$$

$$Q2 = 1/5(350) + 4/5(445) = 445.2$$

$$Q3 = 1/5(450) + 4/5(445) = 445.2$$

$$Q4 = 1/5(550) + 4/5(445) = 445.2$$