Math 1121

Homework # 28

6, 11

#6 $f(x) = 3x + 2$ on $[1, 3]$, $n = 4$

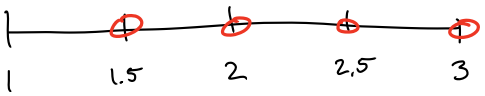
$\Delta x = \frac{3-1}{4} = \frac{1}{2} = .5$

left endpts:

$.5\,(f(1) + f(1.5) + f(2) + f(2.5))$

$= .5\,(3 \cdot 1 + 2 + 3 \cdot 1.5 + 2 + 3 \cdot 2 + 2 + 3 \cdot 2.5 + 2)$

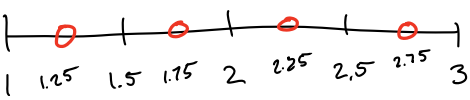
right endpts:



$.5\,(f(1.5) + f(2) + f(2.5) + f(3))$

$= .5\,(3 \cdot 1.5 + 2 + 3 \cdot 2 + 2 + 3 \cdot 2.5 + 2 + 3 \cdot 3 + 2)$

midpts:



$.5\,(3 \cdot 1.25 + 2 + 3 \cdot 1.75 + 2 + 3 \cdot 2.25 + 2 + 3 \cdot 2.75 + 2)$

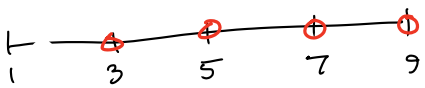
#11 $f(x) = \frac{2}{x}$, on $[1,9]$, $n = 4$

$$\Delta x = \frac{9-1}{4} = \frac{8}{4} = 2$$

left endpts

$$2\left(\frac{2}{1} + \frac{2}{3} + \frac{2}{5} + \frac{2}{7}\right)$$

right endpts



$$2(f(3) + f(5) + f(7) + f(9)$$

$$= 2\left(\frac{2}{3} + \frac{2}{5} + \frac{2}{7} + \frac{2}{9}\right)$$

midpts

$$2\left(\frac{2}{2} + \frac{2}{4} + \frac{2}{6} + \frac{2}{8}\right)$$