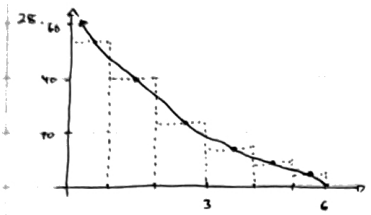
James Ding

Math Homework 4.1B

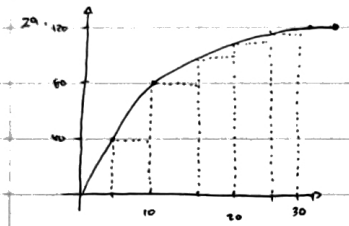
28.



$M_6 = 55+40+25+17+9+3$

$= \boxed{149 \text{ ft}}$

29.

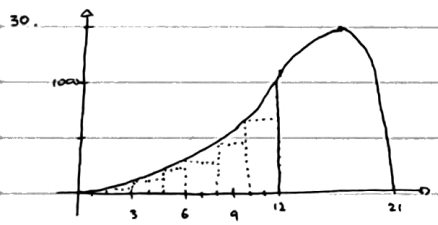


$L_6 = 5(40+80+97+110+115)$

$= 2210 \frac{\text{km}}{\text{h}} \cdot \frac{\text{h}}{3600\text{s}}$

$= \boxed{0.613 \text{ km}}$

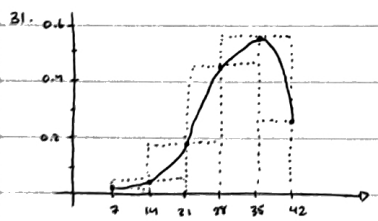
30.



$M_6 = 2(40+216+480+784+1080+1320)$

$= \boxed{7840 \text{ cells/mL}}$

31.



39. $\lim_{n\to\infty} \sum_{i=1}^{n} \left[\left(3+\frac{6}{n}i\right)^2 + 1 \right] \left(\frac{6}{n}\right)$

$b-a = 6 \qquad f(x) = x^2+1$

$a = 3$

$\therefore b = 9 \qquad \therefore \int_3^9 (x^2+1)\,dx$

$\Delta x = 2$, Midpoints at $x = 4, 6, 8$

$2(17+37+65) = \boxed{238}$

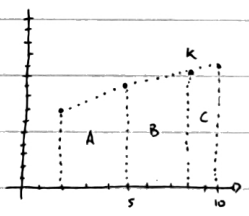
40. The area under the curve of $\sqrt{x}$ between 0 and 1

41. Difference between largest vieman and smallest vieman should result in the difference in the two vieman sums.

$\Delta x = \frac{1}{50}$

$\frac{36}{50} - \frac{16}{50} = \frac{2}{5} = \boxed{0.4}$

42.



$A = \frac{1}{2}(7+9)(3) = 24$

$B = \frac{1}{2}(9+k)(3) = \frac{3}{2}k + \frac{27}{2}$

$C = \frac{1}{2}(k+11)(2) = k+11$

$24 + \frac{3}{2}k + \frac{27}{2} + k + 11 = 61$

$\boxed{k = 5}$

a. $L_6 = 7(0.0079 + 0.0638 + 0.1944 + 0.44135 + 0.5620 + 0.4630)$

$= 12.14 \approx \boxed{12 \text{ deaths}}$

$R_6 = 7(0.0638 + 0.1944 + 0.4485 + 0.5620 + 0.4630 + 0.2897)$

$= 14.11 = \boxed{14 \text{ deaths}}$

43. The area under the curve of x^2+3 from 1,3

44. a. $\lim_{n\to\infty} \sum_{i=1}^{n} \left(\frac{i}{n}\right)^3 \left(\frac{1}{n}\right)$

Derived from, where $a=0$ and $b=1$

$\lim_{n\to\infty} \sum_{i=1}^{n} \left(\frac{b-a}{n}\right)\left(f\left(a+\frac{(b-a)i}{n}\right)\right)$