2. $t = \int_{v(t_0)}^{v(t)} \frac{m}{R(v)}\,dv$, $m = 10\,kg$, $v_0 = 20\,m/s$, $t_0 = a$, $R(v) = -v \cdot \sqrt{v} = -v^{3/2}$

$n = 5$, $v = 5\,m/s$, $f(x) = \frac{m}{R(v)}$, b

d) $Rf(h) = h \cdot \sum_{i=0}^{n-1} f(x_i + \frac{h}{2})$

$h = \frac{b-a}{n} = \frac{5\,m/s - 20\,m/s}{5} = -3\,m/s$

$x_1 = a + 1 \cdot h = 17\,m/s$ $\qquad x_0 = a + 0 \cdot h = 20\,m/s$

$x_2 = 14\,m/s$, $x_3 = 11\,m/s$, $x_4 = 8\,m/s$, $x_5 = b = 5\,m/s$

$Rf(h) = h \cdot \sum_{i=0}^{n-1} f\left(x_i + \frac{h}{2}\right)$

$= -3\,m/s \cdot \left(f(-30) + f\left(-\frac{51}{2}\right) + f(-21) + f\left(-\frac{33}{2}\right) + f(-12)\right)$

$= \underline{\underline{4{,}3823\,m/s}}$

b) $Tf(h) = h \cdot \left(\frac{f(a) + f(b)}{2} + \sum_{i=1}^{n-1} f(x_i)\right)$

$= -3\,m/s \cdot \left(\frac{f(20\,m/s) + f(5\,m/s)}{2} + \left(f(20) + f(17) + f(14) + f(11) + f(8)\right)\right)$

$= \underline{\underline{4.9936\,m/s}}$

c) $Sf(h) = \frac{h}{3} \cdot \left(\frac{1}{2} \cdot f(a) + \sum_{i=1}^{n-1} f(x_i) + 2 \cdot \sum_{i=1}^{n} f\left(\frac{x_{i-1} + x_i}{2}\right) + \frac{1}{2} \cdot f(b)\right)$

$= \frac{-3}{3} \cdot \left(\frac{1}{2} \cdot f(5) + \left(f(17) + f(14) + f(11) + f(8)\right) + 2 \cdot \left(f\left(\frac{20+17}{2}\right) + f\left(\frac{17+14}{2}\right) + f\left(\frac{14+11}{2}\right) + f\left(\frac{11+8}{2}\right) + f\left(\frac{8+5}{2}\right)\right) + \frac{1}{2} \cdot f(5)\right)$

$= \underline{\underline{4{,}4743}}$