

Name: _____

Math 112 Worksheet #5
February 16, 2007

1. Antiderivatives:

(a) $\int 2z^3 - z^{1/3} + 5 dz = ?$

(b) $\int \frac{3}{t} - e^{2t} dt = ?$

(c) $\int xe^{5x^2} dx = ?$

(d) $\int \sqrt{5s + 2} ds = ?$

(e) $\int 8t^3(t^4 + 5)^6 dt = ?$

(f) $\int \frac{\ln q}{q} dq = ?$

2. The table below gives the velocity v of a squirrel (in meters/min). Assuming the squirrel's velocity is always increasing, find upper and lower estimates of the total distance the squirrel has traveled between $t = 0$ and $t = 4$.

Time (min)	0	1	2	3	4
Velocity (m/min)	0	1.25	4	10.25	24.5

3. The graph below gives the rate of change of a population of rabbits on an island for a given year t . Estimate the total change in population from $t = 0$ and $t = 6$.



