5.1

19) (b) LEFT : $.001 \times 0 + .001 \times 40 + .001 \times 62$ (a) .969 mi

$+ .001 \times 82 + .001 \times 96 + .001 \times 108$ 2

$+ .001 \times 116$ .484

RIGHT

27) (a) $a(t) = -32$

$v(t) = -32t + C$

$= -32t + 400$

$-32(5) + 400 = 240$ ✓

t	0	1	2	3	4	5
	400	400	400	400	400	400
$v(t)$	0	-32	-64	-96	-128	-160
	400	368	336	304	272	240

(b) $1 \times 368 + 1 \times 336 + 1 \times 304 + 1 \times 272 + 1 \times 240$

1520 ft

$s(t) = -16t^2 + 400t + C$

$= -16t^2 + 400t$

$s(5) = -16(5)^2 + 400(5)$

5.1

27) (a) $400 - 5(32)$

time	0	1	2	3	4	5
v(t)	400	368	336	304	272	240

(b) RIGHT

$1 \times (368 + 336 + 304 + 272 + 240) = 1520$ FT

29) $30 \times (.20 + .25 + .27 + .34 + .45 + .52 + .63 + .70 + .81 + .85 + .89 + .95)$

5) (b) $[0,2]$, $n = 4$

$\frac{2-0}{4} = \frac{1}{2}$

	0	$\frac{1}{2}$	1	$\frac{3}{2}$	2
	0	.75	1	.75	0

$\frac{1}{2} \times (0 + .75 + 1 + .75) = 1.25$

5.1

9) $f(x) = x^2 - x + 3$, $a=0$, $b=3$ $n=3$ $\frac{3-0}{3} = 1$

0	1	2	3
3	3	5	9

RIGHT-HAND RIEMANN SUM: $\frac{1}{4} - \frac{1}{2} + 3$

$1 \times 3 + 1 \times 5 + 1 \times 9 = \boxed{17}$

LEFT-HAND RIEMANN SUM: $\frac{9}{4} - \frac{3}{2} + 3$

$1 \times 3 + 1 \times 3 + 1 \times 5 = \boxed{11}$ $\frac{25}{4} - \frac{5}{2} + 3$

MID POINT RIEMANN SUM

$\frac{17+11}{2} = \boxed{14}$

0	.5	1	1.5	2	2.5	3
	2.75		3.75		6.75	

$1 \times 2.75 + 1 \times 3.75 + 1 \times 6.75 = 13.25$

$1\,[2.75 + 3.75 + 6.75]$