

AP:

Homework
11/27-12/1

due: Tuesday:

1. pg. 338 / #17, 18, 19
2. Evaluate:
 - a. $\int 2 \cos x \, dx$
 - b. $\int 3 \csc^2 5x \, dx$
 - c. $\int 7 \sin \frac{x}{3} \, dx$
 - d. $\int \frac{2}{5} \sec^2 x^2 \cdot x \, dx$
 - e. $\int (4x^2 \sec x^3 \tan x^3 - 2 \sec^2 x) \, dx$
 - f. $\int \frac{1}{2} (\csc^2 x - \csc x \cot x) \, dx$
 - g. $\int (\sin 2x - 8 \csc^2 8x) \, dx$
 - h. $\int (2 \cos 2x - 3 \sin 3x) \, dx$
 - i. $\int (\sin^2 x + \cos^2 x) \, dx$

Wednesday:

1. If $a = 32$, $v = 20$, and $s = 0$ when $t = 0$, write equations for v and s .
2. The acceleration of gravity near the surface of Mars is 3.72 m/sec^2 . If a rock is blasted straight up from the surface with an initial velocity of 93 m/sec , how high does it go?
3. A particle moves along the x -axis so that at time $t \geq 0$ its acceleration is given by $a(t) = 6t + 6$. At $t = 0$, the velocity of the particle is -9 and its position is -27 .
 - a. Find the velocity of the particle, $v(t)$, at any time $t \geq 0$.
 - b. For what values of t is the particle moving to the right?
 - c. Find $x(t)$, the position of the particle at any time $t \geq 0$.
4. A particle moves along the x -axis so that its velocity at any time $t \geq 0$ is given by $v(t) = 1 - \sin(2\pi t)$.
 - a. Find the acceleration, $a(t)$, of the particle at any time $t \geq 0$.
 - b. For what values of t , $0 \leq t \leq 2$, is the particle at rest?
 - c. Find the position of the particle, $x(t)$, at any time $t \geq 0$ if $x(0) = 0$.

on: Thursday: test

due: Friday:

1. pg. 282 / #1, 2, 3, 4, 5, 6 (middle of page)
2. Evaluate: $\sum_{k=1}^{30} k(k-2)$

Monday: read pp. 265-266

pp. 270-273 / #9 (use RRAM₃), 33, 35