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HW2 - PHY 315

Problem 1

1. T(approx.) = s
2. Integral of f(t) from t {0, 10} is
3. f(t) is the exact solution, h(t) is the SHM approximation.
4. Theta0 = 0.1Pi: 
5. Theta0 = 0.2Pi: 
6. Theta0 = 0.5Pi: 
7. Theta0 = 0.9Pi: 

|  |  |  |
| --- | --- | --- |
| Theta0 (rad) | T (s) | Ratio of exact to approx. T |
| 0.1Pi |  |  |
| 0.2Pi |  |  |
| 0.5Pi |  |  |
| 0.9Pi |  |  |

1. The true period deviates from the approximate period by 1% at theta0 = 0.125Pi