PRECISION

3/b LOSS OF [redacted] [redacted] NEAR

$x = 0, \pi/2, \frac{5\pi}{2}$

$f(0.200) = e^{-(0.2)} + \sin(0.2) - 1$

$\cong 0.819 + 0.199 - 1.000$

$= 0.018$

EXACT SOLUTION IS 0.017 SO THIS DIGIT IS INCORRECT

AN EQUIVALENT FORM OF $f(x) = e^{-x} + \sin x - 1$ IS ITS TAYLOR EXPANSION...

[redacted] $f(x) \cong \frac{x^2}{2} - \frac{x^3}{3} + \frac{x^4}{24} + \frac{x^6}{720}$

$f(0.200) \cong \frac{(0.200)^2}{2} - \frac{(0.200)^3}{3} + \frac{(0.200)^4}{24} + \cdots$

$\cdots + \frac{(0.200)^6}{720}$

$\cong 0.020 - 0.003 + 0.000$

$= 0.017$ — THIS DIGIT IS NOW CORRECT