Assignment 2

Wednesday, February 26, 2025 1:53 PM

$$\frac{P}{A} = 2 \ln^2 \left(\frac{1}{A^2} \cdot \frac{1}{e^{\left(\frac{w(l_{Ak1})}{A}\right)} - 1} \times \frac{hc}{a} \right)$$

$$\begin{array}{c} P \\ \overline{P} \\ \overline{P}$$

$$\frac{p}{n} = 2n \left(\frac{x \lambda T t}{c} \right) \left(\frac{x \lambda t T}{h} \right)^{2} \int_{c}^{r} \left[\left(\frac{\lambda^{2} t T}{h c} \right) ds \right]$$

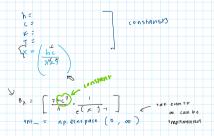
$$\frac{1}{5u}\left(\frac{y_2^{-5}y_2^{-5}}{y_2^{-5}y_2^{-5}}\right)\int_{\infty}^{0}\left[\frac{e_{\eta}^{-1}}{4x}\right]4x$$

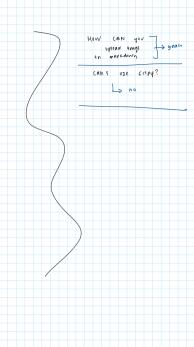
$$\beta_{0} = \frac{2(k_{0}7)}{k_{1}8c^{2}} \int_{0}^{\infty} \frac{x^{3}}{c^{2}} dx$$

$$\frac{2(\kappa_{0}\tau)^{4}}{(\kappa^{3}c^{2})}\int_{0}^{\sigma}\frac{x^{5}}{e^{\kappa-1}}d\kappa=\frac{\pi^{4}}{(5)}$$



2=





```
$ EFFO = 1.014

A = 8.17 × 10°

L = 1.706 × 10°

TEFF = $ 720

d = 0.5
                                                                                    want to change fr no
sump every 2...
             TOTERANCES - Aptrograce [ 5, 11, nom = 6]
              Tes = np. zeros ((8, 1)) ?
            MCF avg - MI + [Teff, SEFF :
                       TR= TEFF - 5740
                     NVM=[Teff / 5700] AAY
                    Alhom = SEFF + O [ FO] + L [TO]2
                     recult = [mvm / denum ] 1/2
                      return requir
               af [valve ~ a == 0]:
                         print If " +ne value 15 correct" [value] ]
                  tor s, method an enumerate (rootfander):
                            print (fusolve we tilerane: Inkit")
                            # BISELTION METHOD
                                   100+ = root fanders (f, start, and, +1)
                                   es = root find (method)
print (+" result of [method]:", res)
★ check if a = 0.5 =0
    bung z: Macuit fam
                     By (7,7) = 2 MC2 1 (MC/ NET)-1
                      \frac{\partial \beta}{\partial \lambda} = \frac{\partial}{\partial \lambda} \left[ \frac{2 \ln c^2}{\lambda^5} \frac{(1 \ln c)^2}{e^{(4c/\ln c)^2}} \right]
                                              x = hc
                                               asplate 2 + ger dx = d7
                                              7 = NC
                                              a [a] = d hc]
                          plug an our replacements
                        OB = ON [ 2 hc 2/5, ex -1]
                            \frac{\partial}{\partial x} \left[ \begin{array}{c} 2 & (x \ge 1)^{5} \\ (hc)^{3} & \frac{1}{c^{5}-1} \end{array} \right]
\frac{2(k1)^{5}}{(hc^{3})} \frac{\partial}{\partial x} \left[ \begin{array}{c} x \le 1 \\ x \ge 1 \end{array} \right]
                                            Quakent vule:
                                          38 - ((x-1) 4x [x,]-x2-4x [ex-1]
                                                   ((*-1)²
```

Quantity (vie:

$$\frac{98}{2x} : \frac{(x^2-1)}{(x^2-1)^2} \frac{d}{dx} \left[x^2 \right] - x^3 \cdot \frac{d}{dx} \left[e^x - 1 \right] \\
(e^x-1)^2 \cdot \frac{(e^x-1)^2}{(e^x-1)^2} \\
= \frac{5x^m}{(e^x-1)^2} - x^3 e^x \cdot \frac{(e^x-1)^2}{(e^x-1)^2} \\
0 = e^x \left[5x^m - x^2 \right] - 5x^m \cdot \frac{(e^x-1)^2}{(e^x-1)^2} \\
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0 = e^x \left[5x^m - x^2 \right] - 5x^m \cdot \frac{(e^x-1)^$$

FIND b numerically via root FINDING

$$\frac{9x}{38} = (2-x)e_x - 2 = 0$$

$$\frac{4x}{48} = 0$$