Problem Set 3

16825 Learning for 3D Vision (Fall 2023)
https://piazza.com/cmu/fall2023/16825

OUT: Feb. 22, 2023
DUE: Mar. 15, 2023 11:59 PM
Instructor: Shubham Tulsiani
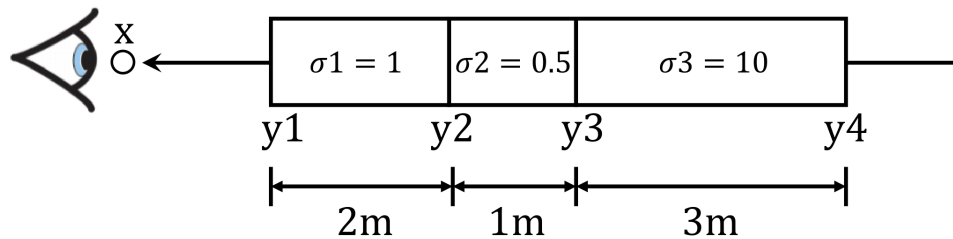TAs: Shibo Zhao, Himangi Mittal, Yehonathan Litman, Yufei Wang, Nupur Kumari

1. [**10 pts**]

Figure 1: A ray through a non-homogeneous medium. The medium is composed of 3 segments
($y1y2$, $y2y3$, $y3y4$). Each segment has a different absorption coefficient, shown as $\sigma_1, \sigma_2, \sigma_3$ in the
figure. The length of each segment is also annotated in the figure (1m means 1 meter).

As shown in Figure 1, we observe a ray going through a non-homogeneous medium. Please
compute the following transmittance:

- $T(y1, y2)$
- $T(y2, y4)$
- $T(x, y4)$
- $T(x, y3)$