## CSci 2033 Practice Exercises $\quad$ Set \#16 May 02, 2018

1. Establish the relations shown at the top of Page 16-17 of Lecture notes \# 16. [Hint: use the relation $A=\sum_{i=1}^{r} \sigma_{i} u_{i} v_{i}^{T}$ from previous page]
2. Compute the nonzero singular values of the matrix

$$
A=\left[\begin{array}{cccc}
1 & 0 & 1 & 2 \\
-1 & 1 & 1 & 1
\end{array}\right]
$$

Check your result using matlab.
What are the nonzero singular values of $A^{T}$ ?

