Homework 5

Color Scheme: Blue problems are graded, orange and red are not. In fact, don't turn in orange and red ones, but *you should try to solve them for yourselves, as exercises.*

Graded | Important | Routine

Groups for this homework: same as Homework 4,

(1) Ahmed Alenezi, Yiting Song, Elliot Spears
(2) Athbi Aljadi, Rod Jafari, Baraka Kombe-Jarvis
(3) Alexa Graffeo, Nathan Lowe, Jade Vanausdall
(4) Tristan Hanna, Alexander Straiting, Michelle Maclennan
(5) Aaron Hong, John Vander Dussen, Yi Xu
(6) Brady Itkin, Bryan Nelson, Aaron Mutchler

Problems:

- Section 4.2: 2acf, 7d, 9, 18 (in fact, prove that if $\{V_i \mid i \in I\}$ is any collection of subspaces of V, then $\bigcap_{i\in I} V_i$ is a subspace of V), 4, 6ab, 7ab, 14 (ker A is a subspace of $\mathbb{R}^n$), 16, 1bc
- Section 4.3: 9, 14, 24, 6, 23a, 25, 1b, 4a, 8
- Section 4.4: 9a, 16, 23b, 5, 4b, 10, 23a, 1af, 2b