**REVIEW SHEET 6, Math 540, Summer 2021, Melody Chan**

**Due Wed June 2 at 11:59pm Eastern Time**

Submit all of the following on Gradescope, and don't forget to tag each answer to its page. We have implemented a course policy whereby failing to tag results in half credit.

I put a copy of this review sheet in the Overleaf folder.

(1) (3 points) Draw pictures of the following lists of vectors as well as you can. If they are linearly independent, just write that. If they are linearly dependent, exhibit a linear combination

$$a_1 v_1 + \cdots + a_m v_m = \mathbf{0}$$

in which not all the $a_i$s are zero.

(a) $(-1, 4), (-1, 5) \in \mathbb{R}^2$

(b) $(1, 0), (0, -1), (0, 0) \in \mathbb{R}^2$

(c) $(1, -1, 0), (0, 1, -1), (-1, 0, 1) \in \mathbb{R}^3$

(2) (6 points) Axler Problem 2.A.10 on page 37.