Use regular sheets of paper, stapled together.
Don't forget to write your name on page 1.

1. (1 point) Let $T_1 : \mathbb{R}^2 \to \mathbb{R}^2$, $T_1(a_1, a_2) = (a_1 + a_2, a_1 - a_2)$. Let $\beta = \{(1, 0), (0, 1)\}$ and $\gamma = \{(1, 2), (1, 1)\}$. Compute $[T]_\beta^\gamma$.

2. (1 point) Let $T_2 : \mathbb{R}^2 \to \mathbb{R}^2$, $T_2(a_1, a_2) = (2a_1 + 4a_2, -a_1 - a_2)$. Let $\beta = \{(1, 2), (-1, 1)\}$ and $\gamma = \{(2, 1), (2, 0)\}$. Compute $[T]_\beta^\gamma$.

3. (1 point) Section 2.2, Problem 10

4. (2 points) Section 2.2, Problem 13

5. (2 points) Section 2.2, Problem 15

6. (1 point) Section 2.3, Problem 1 (No proofs needed.)

7. (2 points) Section 2.3, Problem 11