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

1. (1 point) Section 1.2, Problem 1 (Just say *true* or *false*. You don't have to prove your answer.)

2. (2 points) Section 1.2, Problem 7

3. (1 point) Section 1.2, Problem 11

4. (2 points) Section 1.2, Problem 12

5. (1 point) Let V denote the set of ordered pairs of reals. For $(a_1, a_2), (b_1, b_2) \in V$ and a real number c, define $(a_1, a_2) + (b_1, b_2) = (a_1 + b_1, a_2 \cdot b_2)$ and $c(a_1, a_2) = (ca_1, ca_2)$. Is V a vector space with these operations?

6. (1 point) Section 1.2, Problem 17

7. (1 point) Let V denote the set of ordered pairs of reals. For $(a_1, a_2), (b_1, b_2) \in V$ and a real number c, define $(a_1, a_2) + (b_1, b_2) = (a_1 + 2b_1, a_2 + 2b_2)$ and $c(a_1, a_2) = (ca_1, ca_2)$. Is V a vector space with these operations?

8. (1 point) Section 1.2, Problem 21