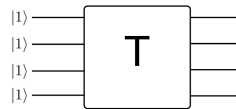


Please show **all** your work! Answers without supporting work will not be given credit. Write answers in spaces provided. Any wrong answer will be judged harshly by your peers and mocked by your professor. Failure to complete the assignment will result in immediate termination from the course.

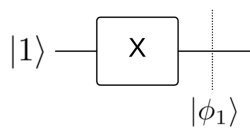
Name: \_\_\_\_\_

1. What is the size of the following transformation matrix



2. Determine the state at  $|\phi_1\rangle$  for the following quantum programs.

(a) The Pauli-X Gate



(b) The Hadamard Gate

