

Write your name and code on the back.

Show your work!

1. { 4 points } Find the value of each of these quantities.

(a) $P(5, 2)$

(b) $C(7, 4)$

2. { 6 points } A coin is flipped nine times where each flip comes up either heads or tails. How many possible outcomes.

(a) contain exactly four heads

(b) contain exactly two tails

(c) contain at least three heads