

Name _____

(circle your lab section)

- ▷ **AB1**, Fri 11:00-12:40, Brian Benson
- ▷ **AB2**, Thu 3:00-4:40, Paul Spiegelhalter
- ▷ **AB3**, Thu 1:00-2:40, Brian Benson
- ▷ **AB4**, Fri 1:00-2:40, Paul Spiegelhalter

- No calculators are allowed.
- Simplify each answer.

1. (3 points) A race involves 6 runners. First, second, and third place awards are made. How many possible outcomes are there for the awards?

2. (2 points) How many subsets of $\{a, b, c, d, e\}$ contain 3 elements?

3. (3 points) A container has 3 red marbles, 1 blue marble, and 1 green marble. If you randomly select two of these marbles without replacement, what is the probability that both of them are red?

4. (2 points) Each of the six faces of a die is equally likely to occur when the die is rolled. However, instead of 1 through 6, the numbers on the faces are 2, 2, 3, 3, 4 and 5. If the die is rolled twice, what is the probability that the sum of the two results is equal to 7?