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| NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_ | **Stats and probability** |
| Quiz 4-7 – Permutation/Combinations 1.5 points each | **DATE: Thursday, May 25, 2017** |

# For each question say permutation, combination, or counting principle (.5) and answer - show ALL work.

1. There are 9 kids on the track team who want to be on the relay team. The relay team is 4 runners. How many different relay teams could the coach come up with?
2. There are 9 kids on the track team who want to be on the relay team. The relay team is 4 runners, with different roles for each runner (ie the finisher). How many different ordered teams could the coach come up with?
3. A coin is flipped and then the spinner below is spun, how many different outcomes are there?

1. Bien is picking his schedule for next year. He has 3 different English classes to choose from, 2different Social Studies, and 4 different math options. He is chooses one of each, how many different sets of these classes could he take?
2. There are 12 teams in the same division as Deering for track. If at a meet, there are 4 different teams, how many different meets are possible?

ADVANCED

Ricky is going to randomly asks girls out. There are 8 girls he has his eye on. If there is a 20% chance each girl will say yes, what is probability that exactly 3 girls will say yes?

First, how many different sets of 3 girls might say yes to him?

Second, whats the chance that the first 3 girls say yes, then the next two say no.

Third: what is probability that exactly 3 girls will say yes?