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

Fill out the bracket and choose a team to win. For the following activity we will assume all teams have equal probability of winning the championship (although this may not be true in real life).

Questions:

What is the probability that a team will win from the west?

What is the probability that a team does not win from the west?

What is the probability that a team from the west and the south wins the tournament?

If you know that your team wins its division (west, south, east, or Midwest), what is the probability that your team will win the championship?

If you know that your team wins its first game, what is the probability that your team will win the championship?

If you know that your team wins its second game, what is the probability that your team will win the championship?

What is the probability that your team will win the championship before any game is played?

Given that one team is disqualified from the event, what is the probability that your team will win? Is this a one or two stage probability? Is the new probability dependent on one team being disqualified?

Suppose that your first friend chooses 6 teams from the west division to win, your second friend chooses 4 teams from the eastern division win, and you choose 2 teams from the south division to win. You collect those 12 team names and place their names in a hat to be chosen randomly.

What is the probability that you would choose a southern team?

What is the probability that you would choose an eastern or western team?

What is the probability that you would choose a mid-western team?

Are these independent or dependent probabilities?

Suppose your friend chooses a southern team randomly from the hat. And then he decides to choose another team (without replacing the southern team name) randomly from the hat.

What is the probability that you would choose a southern team?

What is the probability that you would choose an eastern or western team?

What is the probability that you would choose a mid-western team?

Are these independent or dependent probabilities?

If your first friend chooses 4 teams from the west division to win, your second friend chooses 4 teams from the eastern division, and you choose 2 teams from the south division to win, what is the probability that you and your friends choose the winning team? What is the probability that you did not choose the winning team?