Brown Squirrels can carry 2 acorns at a time. Gray Squirrels can carry 3 acorns at a time.
Black Squirrels can carry 5 acorns at a time.

Suppose the three squirrels all wanted to store acorns for the winter. Depending on how motivated each squirrel was they would end up with different amounts. For instance suppose the Brown Squirrel took 4 trips, the Gray Squirrel took 2 trips and the Black Squirrel took 2 trips. The Brown Squirrel would end up with 8 acorns, the Gray Squirrel would have 6 acorns and the Black Squirrel would have 10 . Between them they took every one of the 24 acorns.

How many different ways could the three Squirrels divide up the 24 acorns and not leave any left over? Each Squirrel must carry their maximum load each trip.

How do you know that you have found all of the ways?