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**PHASE THREE SPREADSHEET MODEL:**

**BASIC CONCEPTS**

The problems you will work in phase three relate to Part Three--"Market Selection and Location Analysis" of *Retailing* (2011) by Dunne, Lusch and Carver.

The baseline financial information can be found by clicking on the flannel shirt

[CLESH007](file:///M:\The%20House%202009\baseline%20phase%203.xlsx)

The new concepts you need to be familiar with concern the trade area of a retail store. Previously we discussed market coverage. In this phase we learn about the determinants of market coverage. An understanding of the following terms is necessary:

1. **trade area** is the geographic area from which a retailer draws its customers.
2. **trade radius** is the number of miles from the store from which customers are attracted. This concept assumes that a store's trade area is represented by a circle surrounding the store. The trade radius would be the radius of that circle.
3. **population density** is the number of people or households per square mile within the store's trade area. In this simulation we use households as the measure of population density.

When you combine the concept of **market coverage**, which we introduced in phase two, with the preceding concepts, the following relationship is obtained.

**market coverage** = (22/7) \* (trade radius squared) \* (population or household density)

To understand the preceding you need to recall that the formula for the area of a circle is pi times the square of the radius of the circle. Where pi is the mathematical constant of 22/7 or 3.142857. Recall that we are assuming that the trade area is circular. If we take pi times the radius squared we get the number of square miles in a circle or the number of square miles in the trade area. If we then multiply this by the population or household density we obtain the total number of people or households in the trade area, or what we refer to as market coverage.

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