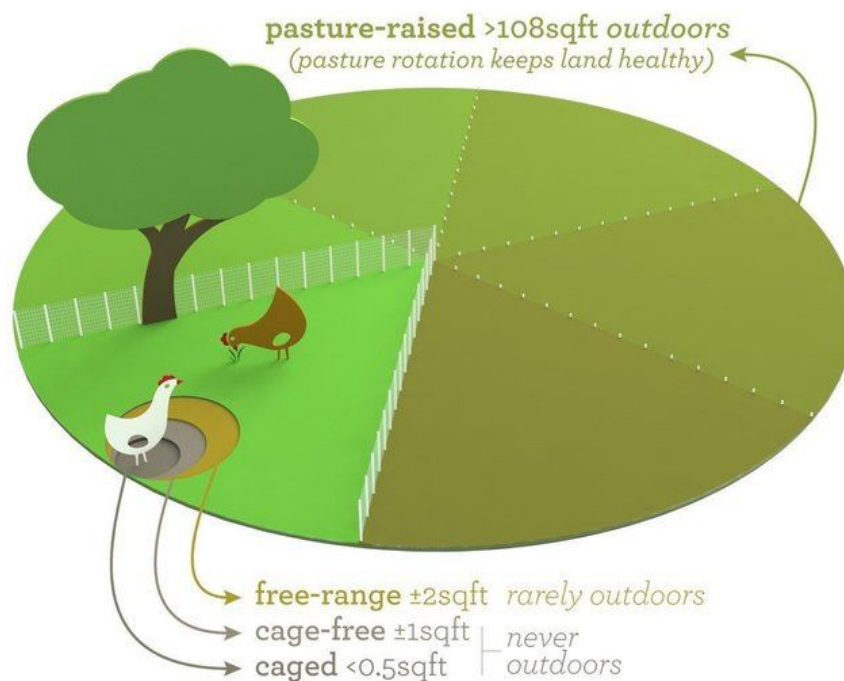


Chickens and Eggs

Have you ever noticed a big difference in prices of the eggs that are sold in grocery stores? Eggs can cost less than \$2 a dozen and as much as \$8 a dozen. There are several different factors that go into the pricing of the eggs, including population density. In your local store, you might see words like "cage free," "free range," or "pasture-raised". Each phrase has a specific meaning when it comes to how much space each chicken is given.

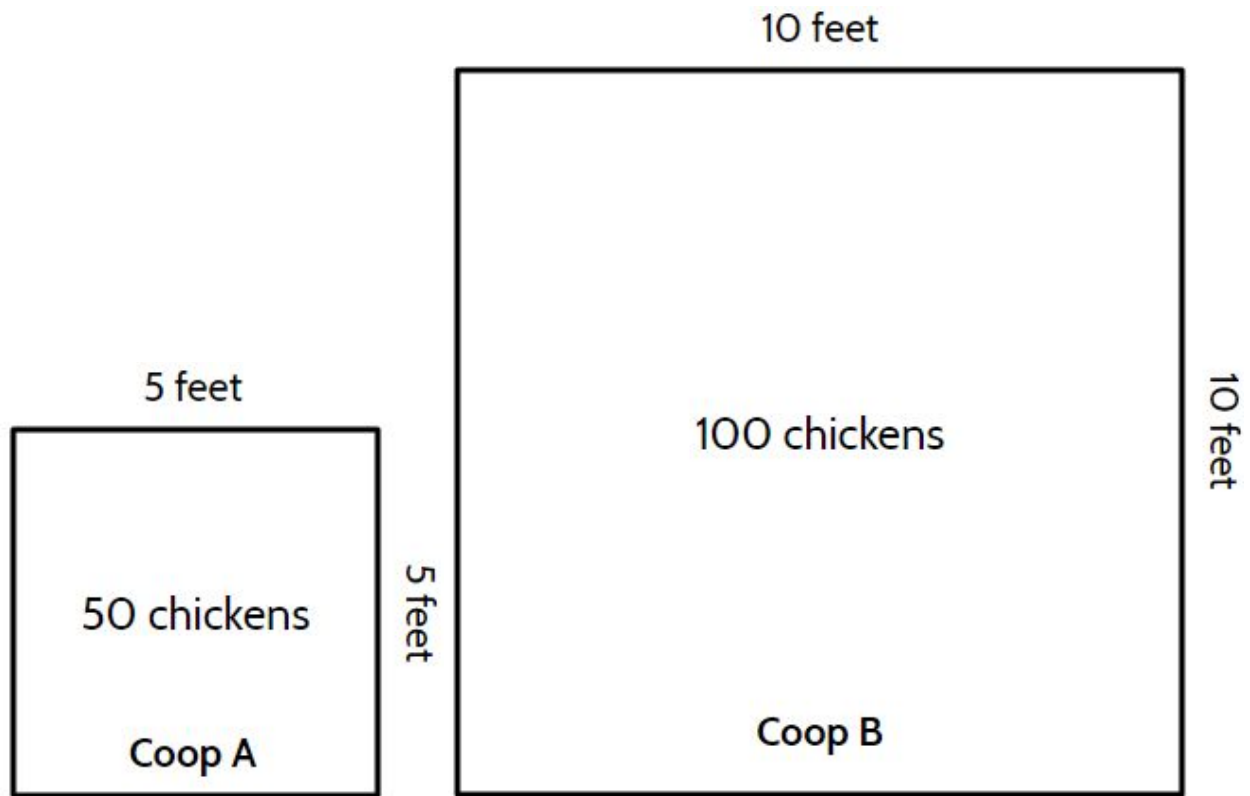
Cage Free means the chickens are raised with at least 1.5 square feet per hen (.67 chickens/ft²). **Free Range** means that each bird has a minimum of two square feet (.5 chickens/ft²). To earn the **Pasture-Raised** description means each bird is given 108 square feet (.01 chickens/ft²). If the egg carton doesn't say cage free, free range or pasture-raised, the eggs are from a large chicken farm where each chicken gets less than half of a square foot and never goes outside.



graphic from Vital Farms

- 1) As a consumer, which type of eggs would you prefer to buy? Why?
- 2) As a farmer, which eggs would you prefer to produce? Why?

Two Chicken Coops



3) What do you notice about the two chicken coops?

4) Record the data for the two chicken coops in a table:

Coop	Number of Chickens	Area (square feet)	Population Density (chickens per sq. ft.)
A			
B			

5) Is Coop A or Coop B more crowded? How do you know?



For the next few questions, create your own chicken coops. Decide on the size and how many chickens it will hold. Add the information to the table above.

6) Create a coop that is less crowded than both Coop A and Coop B.

7) Create a coop that is more crowded than both A and B.

Chicken Coop Practice Questions

- 8) If you added 25 square feet to Coop A, what would the new density be?
- 9) If you added 50 chickens to Coop B, what would the new density be?
- 10) What is the area of a chicken coop with a width of 4 feet and a length of 4.5 feet?
- A. .5 ft²
 - B. 8.5 ft²
 - C. 18 ft²
 - D. 180 ft²
- 11) If you were a farmer, how many chickens could you raise in Coop B...
- If you wanted to call the eggs *Cage-free*? _____
- If you wanted to call the eggs *Free Range*? _____
- If you wanted to call the eggs *Pasture-Raised*? _____
- 12) Chicken farmers sell eggs at a higher price when they have a lower population density because _____
- _____
- 13) Someone who buys eggs might be concerned about population density on poultry farms because _____
- _____
- 14) Challenge question: In many large chicken farms, each chicken has the space of an 8 ½" by 11" sheet of paper. What is this area in square feet? _____ sq. ft.

Note: To convert square inches to square feet, divide by 144.