Barnyard

Grade: 6

Standard: Ratios and proportional relationships. Understand ratio concepts and use ratio reasoning to solve problems.

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Math Objective: Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.

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Language Objective: Student will use ratio vocabulary to describe problem solution(s) and carry on discussion about the problem and extensions.

Problem:

1. You are the counter-person for Tri – M, a meat processing company and a part of Old Macdonald Farms, Inc. On average, Tri-M processes and ships to local stores an average of 125 chickens per day to meet a weekly order quota. They also process and ship an average of 500 cows per week to meet their weekly order quota. The counter-person inventories the animals in the stockyard by counting the number of legs he or she sees. Although this is not a realistic way to count animals, we will be using ratios of chicken legs to cow legs in this scenario. If Tri-M is open Monday through Friday, what is the ratio of chickens to cows that are processed daily? Be prepared to explain how you came up with your answer.
2. On Monday, when taking inventory, you count 450 legs in the preparation yard. How many cows are in the yard? What is the ratio of chickens to cows? How do you know?
3. On Thursday you counted 100 legs. What was the ratio of chickens to cows? How many more animals will the company have to order to meet their average weekly order quota?
4. Can you display or model your answer in a different way?
5. Be prepared to explain to the class how you reached your answer(s) and your model.

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Expectations:

* Kids will demonstrate perseverance in problem solving.
* Kids will display active listening skills.
* Students will work in groups of three or four.
* Students will demonstrate and explain their solutions and strategies to the class.

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Access to the problem:

Introduction will involve a short video clip from “Babe (A Pig’s Life)” and a discussion of how one might keep track of animals on a farm.

Questions to enable task initiation:

* (resource students) I wonder how many legs a chicken has?
* How would this be different from a cow?
* What could you begin to count?
* (On grade level) Where did you start this problem?
* How did you figure out how many cows and chickens are processed each week? Each day?
* (Gifted) Find another way to model your solution.
* If Tri-M has advanced orders for a month, how many chickens and cows will have to be processed at the current rate?

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