**NAME:** _____

Farming Fractions

Use your understanding of math to construct arguments about the Farmers' family farm.

1. Dairy cows have stomachs with four chambers, or parts. That means they can digest food differently than people do.

More than ½ of the Farmers' cows' diet is grass. Less than ¼ of their cows' diet is grain. The rest of what the cows eat is leftovers from producing other foods (like pulp from oranges or hulls from almonds).
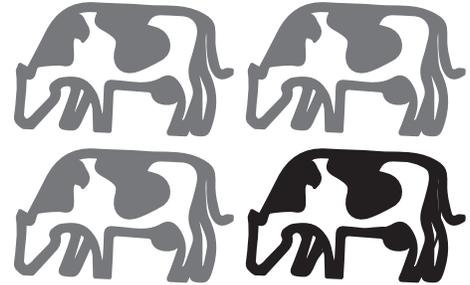
a) Your friend says the Farmers feed the cows more grain than grass because the 4 in ¼ is bigger than the 2 in ½. Is your friend right? Explain your reasoning.

b) What type of food is the largest part of the cows' diet? How do you know?

c) Circle the correct statement: ¼ > ½   ½ > ¼

2. The Farmer family has a plan for conserving water on their farm. They reuse water several times to keep the cows cool, clean the equipment, and water the crops they grow.

The Farmers' goal for this year was to use no more than ¼ of the amount of water they used last year.
The actual amount of water used this year was ⅕ of the amount used last year.

a) Did the Farmer family meet their goal?

b) How do you know?

c) Circle the correct statement: ⅕ < ¼   ⅕ > ¼

3. The Farmer family uses a methane digester to turn cow manure into power (electricity). One cow's manure can provide about $^1/_{15}$ of the energy that an average home uses in a day.

The Farmers have 80 cows on their farm. Tyrell Farmer says the amount of electricity they create via the methane digester is enough to power the equivalent of about 3 homes each day. Nevaeh Farmer says it's closer to 5 homes each day.

a) Whose estimate is closer?

b) How do you know?