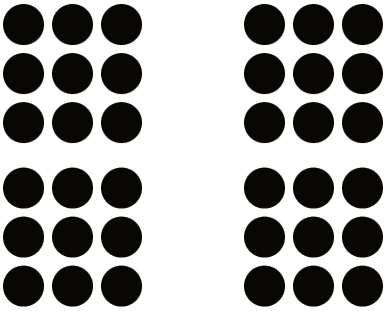
Unit 2 Lesson 5: Defining Equivalent Ratios

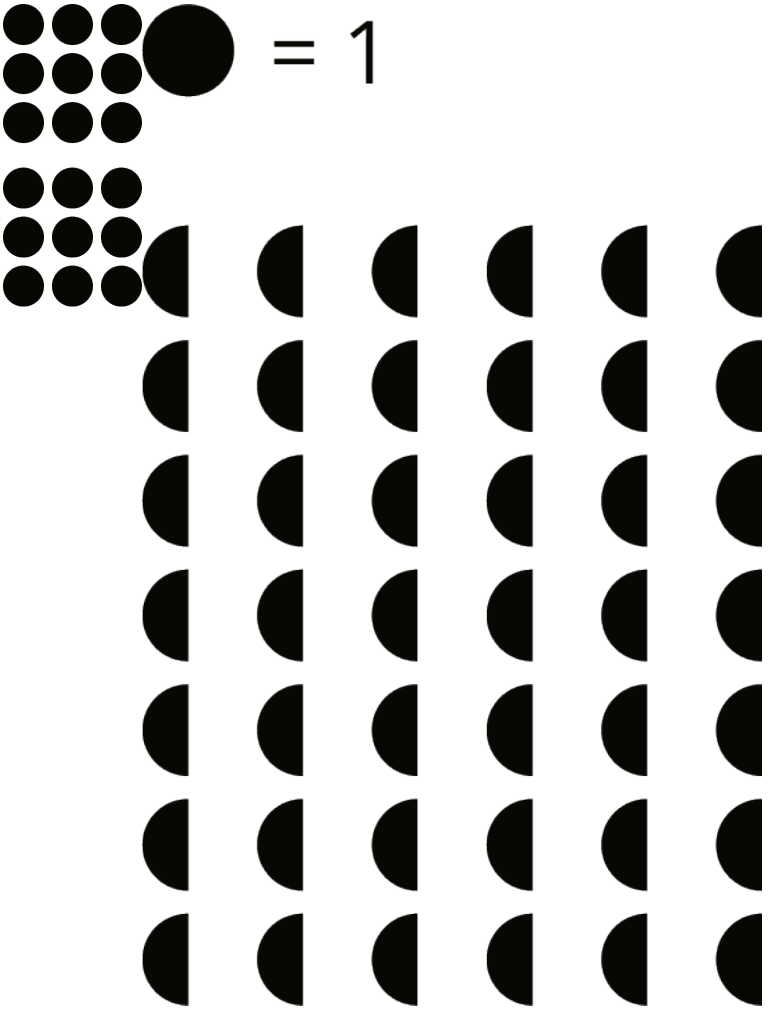
1 Dots and Half Dots (Warm up)

Student Task Statement

Dot Pattern 1:



Dot Pattern 2:



2 Tuna Casserole

Student Task Statement

Here is a recipe for tuna casserole.

Ingredients

- 3 cups cooked elbow-shaped pasta
- 6 ounce can tuna, drained
- 10 ounce can cream of chicken soup
- 1 cup shredded cheddar cheese
- $1\frac{1}{2}$ cups French fried onions

Instructions

Combine the pasta, tuna, soup, and half of the cheese. Transfer into a 9 inch by 18 inch baking dish. Put the remaining cheese on top. Bake 30 minutes at 350 degrees. During the last 5 minutes, add the French fried onions. Let sit for 10 minutes before serving.

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1. What is the ratio of the ounces of soup to the cups of shredded cheese to the cups of pasta in one batch of casserole?
2. How much of each of these 3 ingredients would be needed to make:
   a. twice the amount of casserole?
   b. half the amount of casserole?
   c. five times the amount of casserole?
   d. one-fifth the amount of casserole?
3. What is the ratio of cups of pasta to ounces of tuna in one batch of casserole?
4. How many batches of casserole would you make if you used the following amounts of ingredients?
   a. 9 cups of pasta and 18 ounces of tuna?
   b. 36 ounces of tuna and 18 cups of pasta?
   c. 1 cup of pasta and 2 ounces of tuna?

3 What Are Equivalent Ratios?

Student Task Statement

The ratios $5 : 3$ and $10 : 6$ are **equivalent ratios**.

1. Is the ratio $15 : 12$ equivalent to these? Explain your reasoning.
2. Is the ratio $30 : 18$ equivalent to these? Explain your reasoning.
3. Give two more examples of ratios that are equivalent to $5 : 3$.
4. How do you know when ratios are equivalent and when they are *not* equivalent?
5. Write a definition of *equivalent ratios*.

   Pause here so your teacher can review your work and assign you a ratio to use for your visual display.

6. Create a visual display that includes:
   - the title "Equivalent Ratios"
   - your best definition of *equivalent ratios*
   - the ratio your teacher assigned to you
   - at least two examples of ratios that are equivalent to your assigned ratio
   - an explanation of how you know these examples are equivalent
   - at least one example of a ratio that is *not* equivalent to your assigned ratio
   - an explanation of how you know this example is *not* equivalent

   Be prepared to share your display with the class.