1. Molly is baking for the Moms and Muffins event at her school. She will bake 4 batches of banana muffins. She needs $\frac{3}{4}$ cups of bananas for each batch of muffins.

**Part A**
Molly completed the multiplication below and said she needed $1\frac{3}{4}$ cups of bananas for 4 batches of muffins. What is Molly's error?

$$4 \times \frac{3}{4} = \frac{7}{4} \times \frac{1}{4} = \frac{7}{1} = 1\frac{3}{4}$$

Molly tried to multiply a unit fraction by a whole number, but she added 4 + 3 to get 7 instead of multiplying $4 \times \frac{3}{4}$ to get 12.

**Part B**
What is the correct number of cups Molly needs for 4 batches of muffins? Explain how you found your answer.

3 cups; Possible explanation: First I multiplied a unit fraction by a whole number by changing $4 \times \frac{3}{4}$ to $12 \times \frac{1}{4}$. Then, I multiplied and got $1\frac{3}{4}$, which is equal to 3.

2. Theo is comparing shark lengths. He learned that a dogfish shark is $\frac{3}{4}$ meter long. A blue shark is 5 times as long as a dogfish shark. Find the length of a blue shark.

A blue shark is $\frac{15}{4}$ meters long.

3. Mimi recorded a play that lasted $\frac{3}{4}$ hour. She watched it 3 times over the weekend to study the lines. How many hours did Mimi spend watching the play? Show your work.

2 hours; $\frac{3}{4} \times 3 = \frac{9}{4} = 2$

4. Select the correct product for the equation.

$$4 \times \frac{5}{8} = \frac{20}{8}, \quad 4 \times \frac{3}{8} = \frac{16}{8}$$

5. Mrs. Burnham is making modeling clay for her class. She needs $\frac{5}{8}$ cup of warm water for each batch.

**Part A**
Mrs. Burnham has a 1-cup measure that has no other markings. Can she make 6 batches of modeling clay using only the 1-cup measure? Describe two ways you can find the answer.

Yes; Possible explanation: She needs $6 \times \frac{5}{8}$ cups of water. I can use a number line to make 6 jumps of $\frac{5}{8}$. The 6 jumps end at $\frac{5}{8}$ or $\frac{5}{8}$, or $\frac{5}{8}$, or $\frac{5}{8}$, or $\frac{5}{8}$, or $\frac{5}{8}$. The sixth multiple is $\frac{5}{8}$, which is 4 whole cups. She can use the 1-cup measure 4 times to make 6 batches.

**Part B**
The modeling clay recipe also calls for $\frac{1}{4}$ cup of cornstarch. Nikki says Mrs. Burnham will also need 4 cups of cornstarch to make 6 batches of clay. Do you agree or disagree? Explain.

I disagree; Possible explanation: $6 \times \frac{1}{4} = \frac{6}{4} = 3$. She needs 3 cups of cornstarch, not 4.

6. Mr. Tuyen uses $\frac{5}{8}$ of a tank of gas each week to drive to and from his job. How many tanks of gas does Mr. Tuyen use in 5 weeks? Write your answer two different ways.

Mr. Tuyen uses $\frac{25}{8}$ or $3\frac{1}{8}$ tanks of gas.