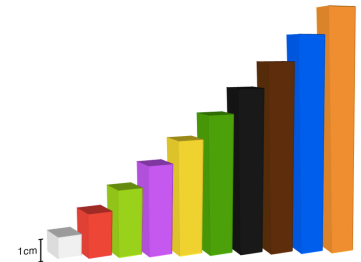


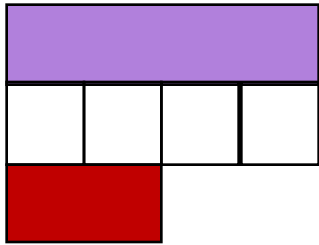
# Models of Multiplication: Whole Number x Mixed Number

You will need: journal/paper, pencil, Cuisenaire rods or other fraction manipulatives

1. Model the problem  $2 \times 4 \frac{1}{4}$  using manipulatives.
  - Which rod will represent 1 whole?
  - Which rod will represent  $\frac{1}{4}$  ?
2. Use numbers, models, pictures and words to show how you solved the problem.
3. Model the expression  $2 \times 3\frac{1}{2}$  in two ways.
  - Model 1 – Use Cuisenaire Rods. Determine the whole.
  - Model 2 – Use the distributive property.
4. Can you create and model another mixed number multiplied by a fraction expression?
5. Create a story context for one of the expressions.



Sample Solution: Maria wanted to hike 10 miles. At the park, she hiked to the waterfall and back. The trail was  $4\frac{1}{4}$  miles one way. Did Maria hike 10 miles? If not, how many miles did she hike?



Purple represents one whole.

White is  $\frac{1}{4}$ .

Red is  $\frac{1}{2}$



I built  $4\frac{1}{4}$  two times using purple and white bars.

I replaced 2 white with the equivalent red. This leaves 8 purple and 1 red (2 whites).

$$2 \times 4\frac{1}{4} = 8\frac{1}{2}$$