Dividing Fractions: End-of-Unit Assessment (A)

Calculators should not be used.

1. Mai biked $6\frac{3}{4}$ miles today, and Noah biked $4\frac{1}{2}$ miles. How many times the length of Noah's bike ride was Mai's bike ride?

   A. $\frac{2}{3}$ times as far

   B. $\frac{3}{2}$ times as far

   C. $\frac{9}{4}$ times as far

   D. $\frac{243}{8}$ times as far

2. Select **all** equations that represent this question:

   Priya is stacking building blocks to make a tower. She takes a break when the tower is $2\frac{1}{2}$ feet tall, which is $\frac{5}{8}$ of the height of the tower she wants to build. How tall is the tower when finished?

   A. $\frac{5}{8} \cdot ? = 2\frac{1}{2}$

   B. $\frac{5}{8} \div 2\frac{1}{2} = ?$

   C. $2\frac{1}{2} \cdot ? = \frac{5}{8}$

   D. $2\frac{1}{2} \cdot \frac{5}{8} = ?$

   E. $2\frac{1}{2} \cdot \frac{8}{5} = ?$

   F. $2\frac{1}{2} \div \frac{5}{8} = ?$

3. Select **all** statements that show correct reasoning for finding $15 \div \frac{2}{9}$.

   A. Multiply 15 by 2, then divide by 9.

   B. Multiply 15 by 9, then divide by 2.

   C. Multiply 15 by $\frac{1}{9}$, then multiply by 2.

   D. Multiply 15 by 9, then multiply by $\frac{1}{2}$.

4. Divide.

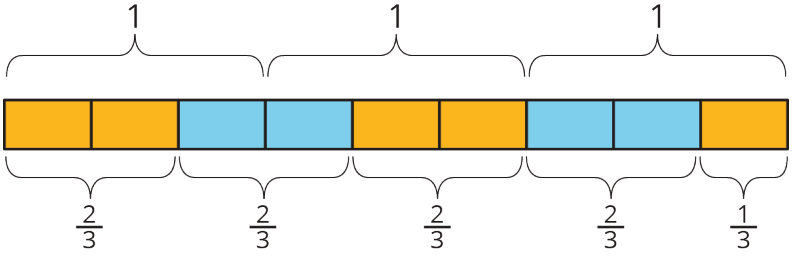
   a. $\frac{3}{4} \div \frac{1}{5}$

   a. $\frac{4}{9} \div \frac{8}{15}$

   b. $\frac{9}{2} \div \frac{3}{4}$

   b. $5\frac{2}{3} \div \frac{3}{2}$

5. Andre draws this tape diagram for $3 \div \frac{2}{3}$:



   Andre says that $3 \div \frac{2}{3} = 4\frac{1}{3}$ because there are 4 groups of $\frac{2}{3}$ and $\frac{1}{3}$ left. Do you agree with Andre? Explain your reasoning.

6. How many $\frac{1}{3}$ inch cubes does it take to fill a box with width $2\frac{2}{3}$ inches, length $3\frac{1}{3}$ inches, and height $2\frac{1}{3}$ inches?

7. Lin has two small baking pans, each shaped like a rectangular prism. For each question, explain or show your reasoning.

   a. Lin lines the bottom of her first pan with aluminum foil. The area of the rectangular piece of foil is $11\frac{1}{4}$ square inches. Its length is $4\frac{1}{2}$ inches. What is the width of the foil?

   b. Lin's second pan has a length of $\frac{8}{3}$ inches, a width of $\frac{15}{4}$ inches, and a height of $\frac{3}{2}$ inches. What is the volume of the second pan?