Problem 1
There are $\frac{15}{4}$ pounds of flour. A recipe for a loaf of bread calls for $\frac{3}{4}$ of flour. How many loaves of bread can we make if we use all flour?

Write the math sentence to solve this problem: $? = \frac{?}{?}$

Problem 2
There are $2\frac{2}{5}$ gallons of ice cream. If each banana split needs $\frac{2}{5}$ gallons of ice cream, how many banana splits can we make if we use all ice cream we have?

Write the math sentence to solve this problem: $? = \frac{?}{?}$

Solve these problems using the diagrams below. Use each rectangle as a whole (1) and cross out the unnecessary ones (or parts of one).

Problem 1

Problem 2

Yours IS to reason: Don't just invert and multiply

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Slides and handouts are available at http://science.kennesaw.edu/~twatanab/
Solve each of the following problems by drawing diagrams.

\[
\frac{25}{6} \div \frac{5}{6} = ?
\]

\[
\frac{18}{7} \div \frac{3}{7} = ?
\]

Describe what you would draw if you were to solve the following problem using a diagram?

\[
\frac{18}{89} \div \frac{3}{89} = ?
\]

How might you describe how you would divide fractions?
Problem 3

With 1 $dl$ of paint, you can paint $\frac{3}{5} m^2$ of board. How many $m^2$ can you paint with 2 $dl$ of paint?

What operation do you need to find the answer?

$$\frac{a}{b} \times c =$$
Problem 4

With 3 $dl$ of paint, you can paint $\frac{4}{5} m^2$ of board. How many $m^2$ can you paint with 1 $dl$ of paint?

What operation do you need to find the answer?

\[
\frac{a}{b} \div c =
\]
Problem 5

With 1 \( dl \) of paint, you can paint \( \frac{4}{5} \) \( m^2 \) of board. How many \( m^2 \) can you paint with \( \frac{2}{3} \) \( dl \) of paint?

What operation do you need to find the answer?

\[
\frac{a}{b} \times \frac{c}{d} =
\]

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Problem 6

With \( \frac{3}{4} \text{ dl} \) of paint, you can paint \( \frac{2}{5} \text{ m}^2 \) of board. How many \( \text{ m}^2 \) can you paint with 1 \( \text{ dl} \) of paint?

What operation do you need to find the answer?

\[ \frac{a}{b} \div \frac{c}{d} = \]
PROPERTIES OF DIVISION

\[
a \div 1 = a
\]

\[
a \div b = (a \times k) \div (b \times k) \quad \text{M4N4(d)}
\]

\[
\frac{9}{14} \div \frac{3}{4} = ?
\]

What do we need to do so that we can change this to...

\[
\frac{\Delta}{O} \div 1 = ?
\]

\[
\left( \frac{9}{14} \times - \right) \div \left( \frac{3}{4} \times - \right) = ?
\]

\[
\frac{9}{14} \div \frac{3}{4} = \frac{9}{14} \times -
\]