Relating Decimal & Fraction Multiplication

Objective: I can convert decimals to fractions and x.

Check X Reasoning

A fraction **x** a fraction = Product will be less then what you started with

• A whole number **x** a fraction = Product will increase

• "of a number" means product will become less

• "of" means to multiply

L**OO**k To Learn

10 x 1 = 10

10 x 10 = 100

10 x 10 x 10 = 1,000

10 x (10 x 10 x 10) = 10,000

10 x 10 x (10 x 10 x 10) = 100,000

10 x 10 x 10 x (10 x 10 x 10) = 1,000,000
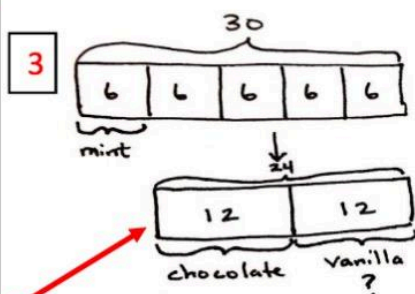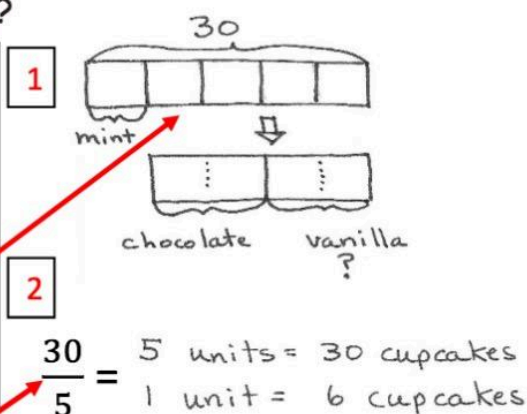
Multiplying Fractions

Objective: I can multiply to solve
fraction word problems

Joakim is icing **30 cupcakes**. He spreads mint

icing on $\frac{1}{5}$ of the cupcakes and chocolate on $\frac{1}{2}$

of the remaining cupcakes. The rest will get

vanilla frosting. How many cupcakes have

vanilla frosting?

Use a tape diagram to visualize the info. The denominator tells me that 5 makes up the "whole".

|1|

30

mint

chocolate   vanilla
?

|2|

30 units is divided by 5, what is each unit worth?

$$\frac{30}{5} =$$ 5 units = 30 cupcakes
1 unit = 6 cupcakes

|3|

1/5 = 6. 4/5 is left. Half of that (2/5) is chocolate. The last half (2/5) must be vanilla!
2/4 of 30 = 12

30

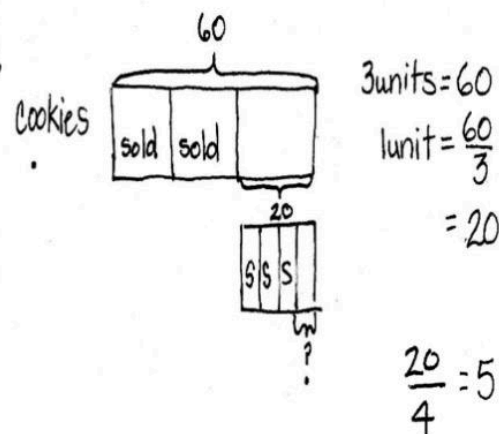6 6 6 6 6

mint

24

12   12

chocolate   vanilla
?

24 ÷ 2 = 12

Multiplying Fractions

Objective: I can multiply to solve
fraction word problems

Mrs. Onusko made 60 cookies for a bake sale. She sold $\frac{2}{3}$ of them and gave $\frac{3}{4}$ of the remaining cookies to the students working at the sale. How many cookies did she have left?

60

Cookies

sold sold

20

S S S

?

3 units = 60

1 unit = $\frac{60}{3}$

= 20

$\frac{20}{4}$ = 5

OR

$\frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$

$\frac{1}{12} \times 60 = \frac{60}{12} = 5$

Mrs. Onusko had 5 cookies left.