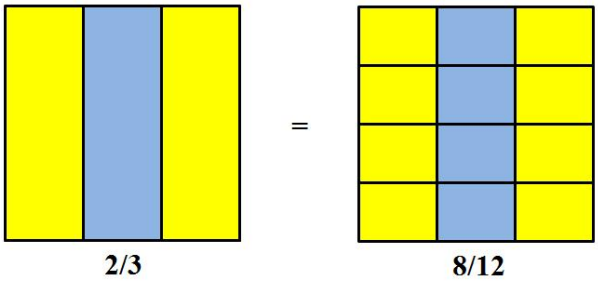
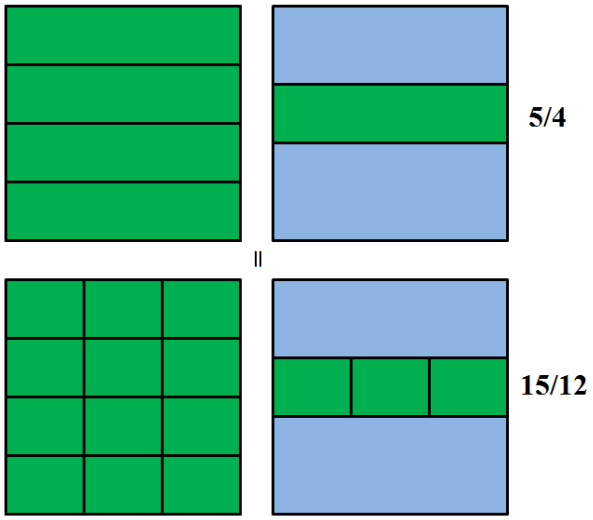
Grade 5 Fractions SOLUTIONS

1. 2/3 +5/4 Show your work

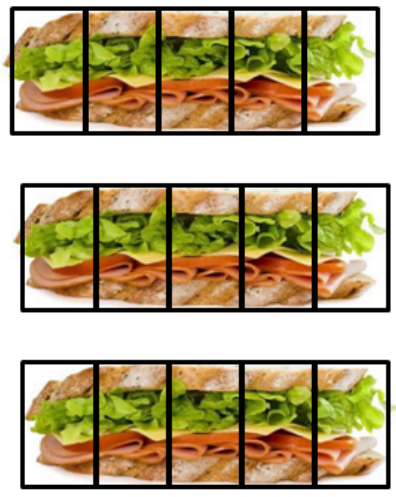




2/3 + 5/4 = 8/12+15/12=(8+15)/12=23/12
=1 11/12

2. James argued that 2/5 +1/2 = 3/7. Do you agree or disagree. Make sure you are able to explain your thinking. *3/7 < ½ and so 3/7 cannot be the answer to an addition problem where we add 2 positive numbers and get something smaller than one of them!*

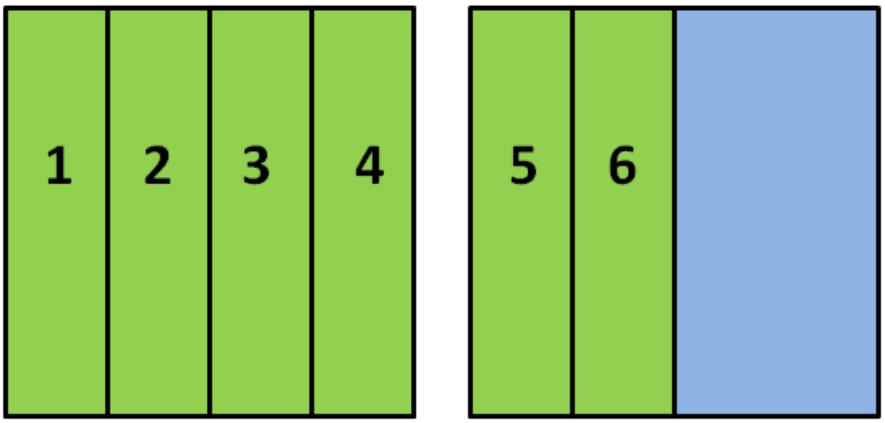
3. If 5 people equally share 3 Sub sandwiches, how much sandwich will each person get? Show your work!



3 sandwiches is 15 5ths of a sandwich. Since 3x5=15 each of the 5 people will get 3 of the "sandwich rectangles" Shown. Thus each person gets 3/15th of a sandwich

4. Solve following problem. Show your work!

¼ x 6 =



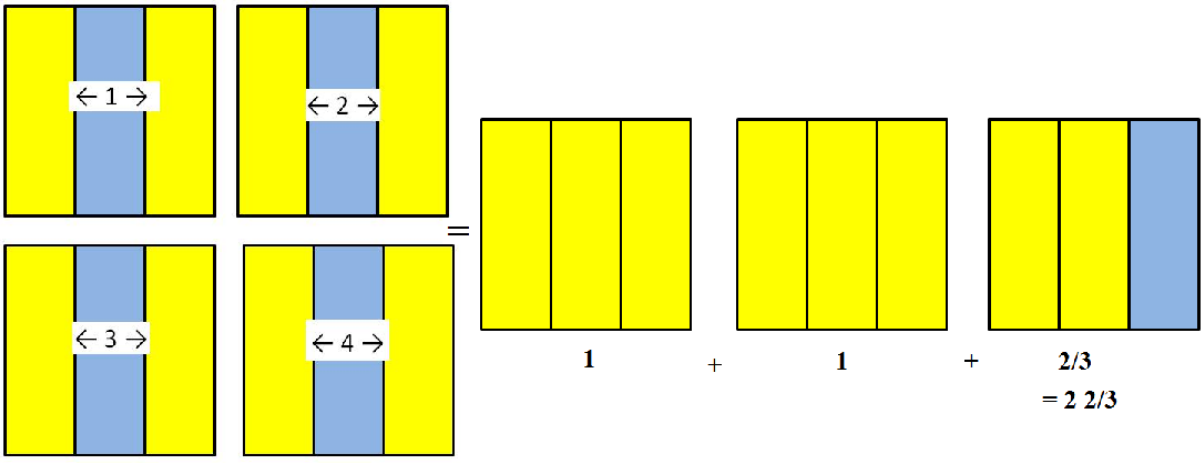
1 WHOLE

Half of the whole

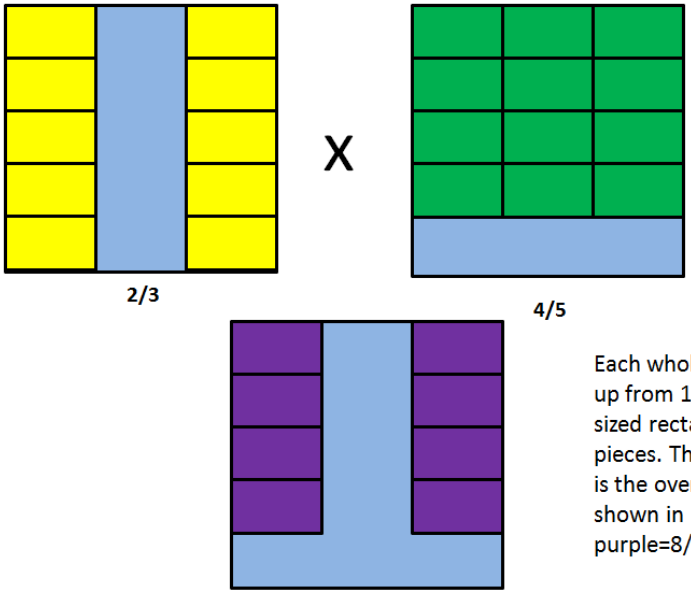
6 x ¼ is 6 4ths
Which we show
here. Together they
make 3/2=1 1/2

5. Create a story problem for the following equation and show how you can solve it by using a visual fraction model

(2/3) x 4 =8/3 *There are 8 3rds on the left where we created 4 copies of 2/3rds.*



6. Color the area of the rectangle 2/3 x 3/5



7. Marlene was baking and the recipe required the following. She decided to half the recipe so that she did not make too much food. If she decided to half the recipe, how much of each quantity would she need.

   Original recipe

   Milk 1 ½ cups
   ½ cup of sugar

Half the milk and half the sugar for one recipe gives a half recipe of
¼ cup of sugar
¾ cup of milk.

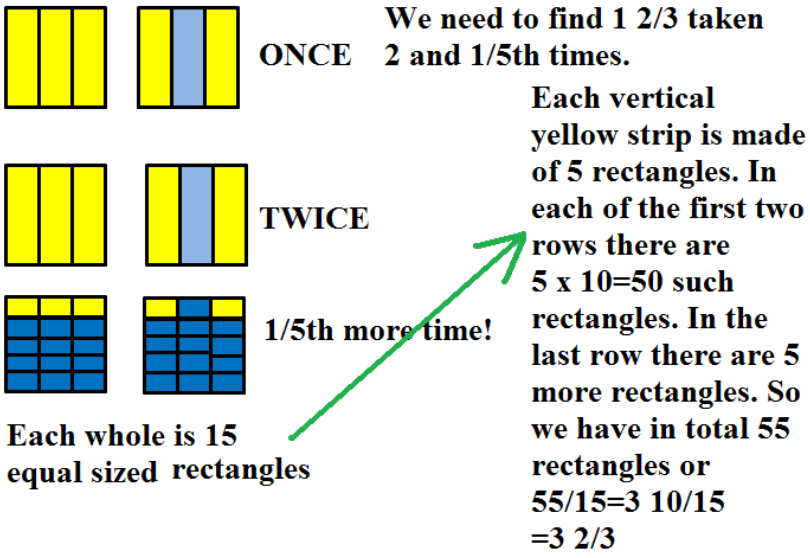
8. 1 2/3 x 2 1/5=

=(1+2/3)x(2+1/5) To determine this we have 4 multiplications to do

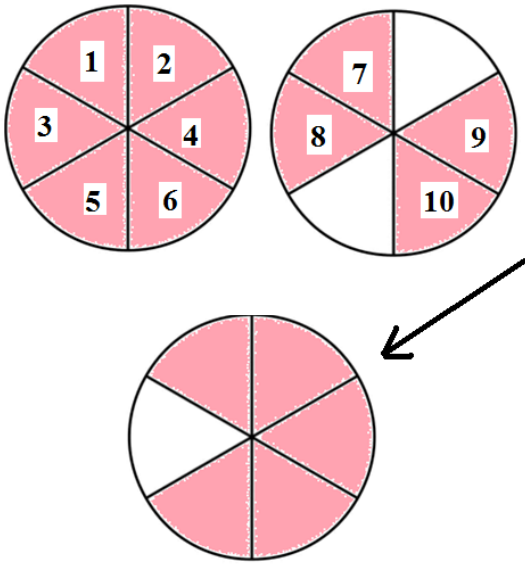
- *1 x 2=2*
- *2/3 x 2=4/3=1 1/3*
- *1x1/5=1/5*
- *2/3 x 1/5=2/15*

Now we must add these all up
=2+1 1/3+1/5+2/15
The whole parts add up to 2+1=3
The fractional parts are 1/3+1/5+2/15=5/15+3/15+2/15=10/15=2/3
So in total we have 3 2/3.

Here is a model for another approach:

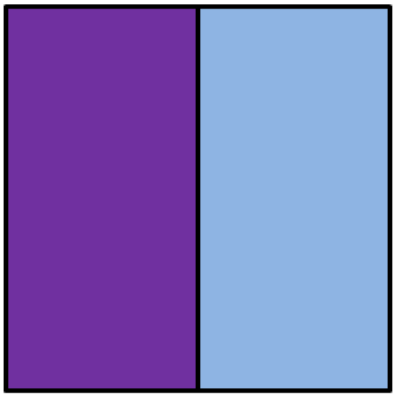


9. What is ½ of 1 4/6 pizzas? Draw a picture and explain your thinking

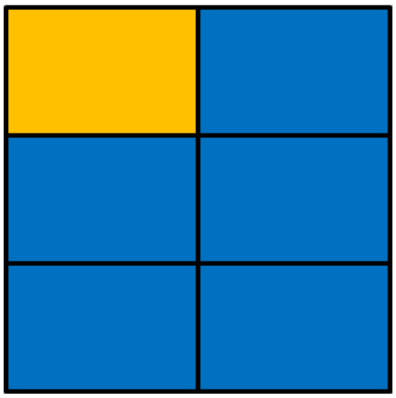


Here we have 1 and 4/6ths pizzas. This is 10 slices of Pizza. Half of the 10 slices is 6 slices or 5/6ths of a pizza.

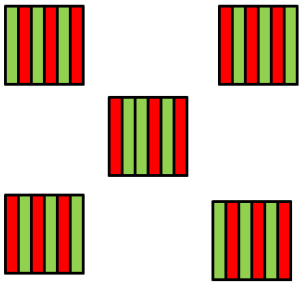
10. 1/2÷3= *The answer is 1/6th.*



The purple strip is one half of the whole. We will divide that into 3 parts (and thus in the process divide the whole into 6 parts). We get one orange rectangle or 1/6th of the whole

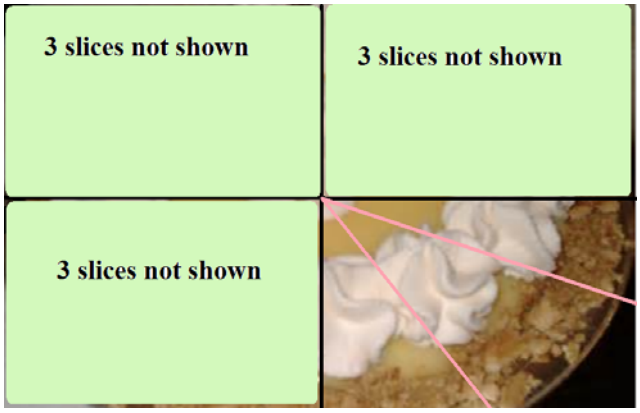


11. 5÷2/6=*15*



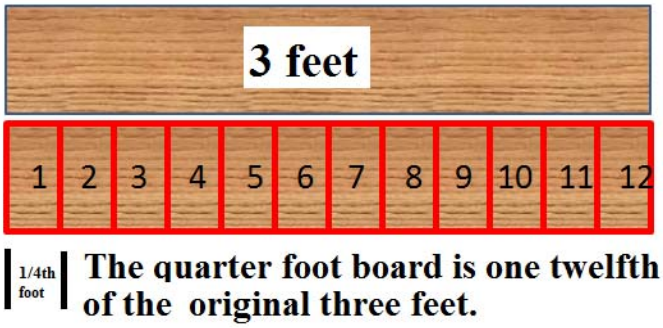
Each vertical bar represents 1/6th. Thus a pair consisting of one red and one green is 2/6ths. There are 15 such pairs so the answer is 15.

12. Create a story context for (1/4) ÷ 3, and use a visual fraction model to show your reasoning.
We have 1/4th of a banana crème pie. There are 3 of us who were not around when the pie was new! We want to share this equally. How much does each person get?



Above we see a fourth of the pie cut into 3 equal pieces. By imagining this under each of the other 3 green rectangles we can see that the whole pie consists of 12 such slices. Thus each person gets 1/12th of the pie.

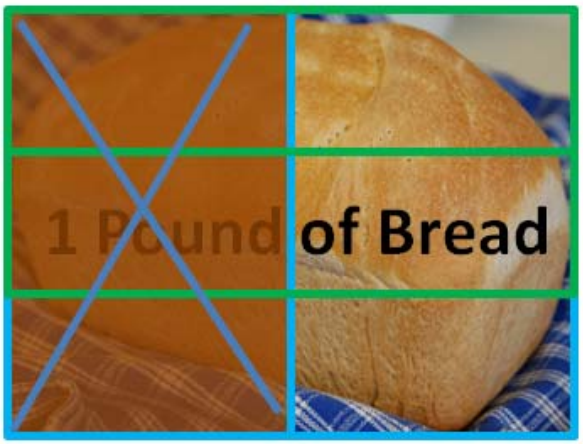
We have a board which is 3 feet long. However, to build our toy house we only need ¼ foot. What fraction of our board will we use?



13. Create a story context for 3÷ (1/5), and use a visual fraction model to show the quotient.
King Tut will pay the members of his court 1/5th of a bag of gold each for their loyalty and exceptional service. He has 3 bags of gold currently. How many court members can he pay?
ANSWER is 15

We have 3 gold bags and each has been vertically sliced into 5 equal parts. (We have to assume the same amount of gold is in each slice!). This gives us 15 slices in total!

14. How much bread will each person get if 3 people share 1/2 lb. of bread equally?



Each of the 3 People gets 1 of the 6 equal pieces of the pound or 1/6th of a pound

15. How many 1/4-cup servings are in 2 cups of Almonds? *There are 8*