

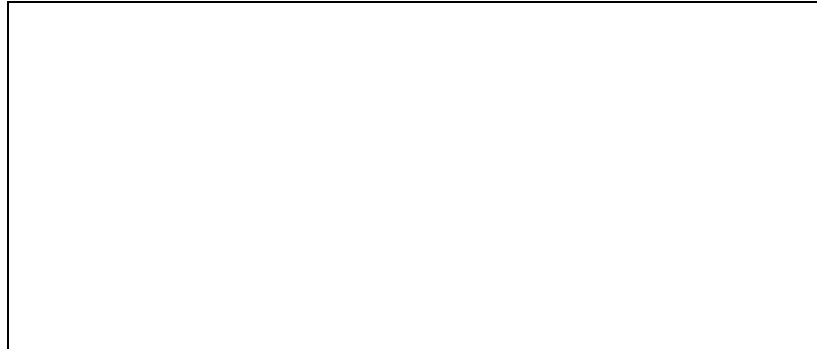
Name _____

Date _____

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Fraction Equivalence

1. a) James' mom promised him half a blue berry pie for helping her pick berries. When the pie was baked, she cut it in half and gave half to James as promised. Draw a pie and shade half of it to show the part promised to James.



b) A neighbor phoned and told James' mother that she and her two children would be stopping to visit. So she told James that she would have to postpone her promise. Then she cut the pie again so that there were four equal pieces, one piece for James and one piece for the neighbor and her two children. Draw a diagram to show how the pie was re-cut.



c) A few minutes later, the phone rang again and the neighbor explained that plans had changed and they would not be visiting. James' mother then gave two pieces of the four equal pieces to James. Did James' mother keep her promise? Explain.

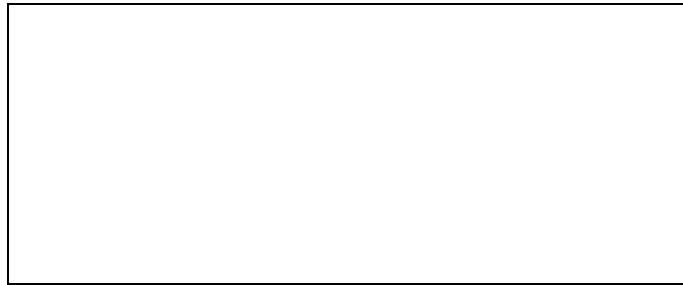
Learning Fractions with Eggs

(There are 12 eggs in one dozen.)



2. There are $\frac{1}{3}$ of a dozen eggs left in the egg carton in Fran's refrigerator. John has 4 eggs left in the egg carton in his refrigerator.

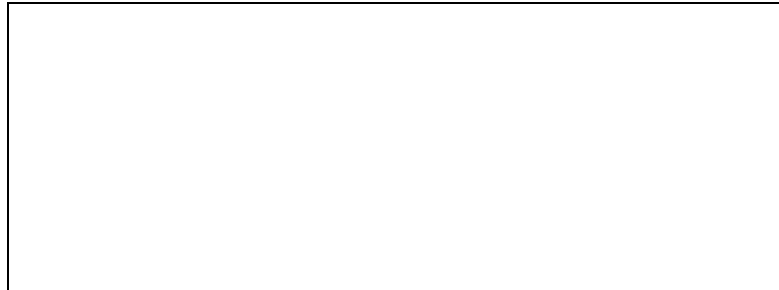
a) Draw a carton and shade the eggs left in Fran's carton.



c) Who has more eggs, Fran or John? Explain your answer.

d) What fraction of a dozen is 4 eggs? Write the fraction. _____

e) Draw a picture to show how many eggs had been eaten out of Fran's carton?



f) How many eggs had John eaten? _____

g) Write the fraction amount that tells how many eggs John had eaten? _____

h) Who had eaten more eggs? Explain your answer.

Fractions like $\frac{1}{3}$ (one third) and $\frac{4}{12}$ (four twelfths), which are the same amount but have a different name, are called equivalent fractions.

(Use a standard 12 inch ruler.)

3. Look at your ruler and make an enlarged drawing of the first inch. Make certain that you include all the marks on your drawing that are on the ruler.



- a) Does your drawing separate the inch into 16 equal parts or sections? _____
- b) Write the fraction name for one of these small sections. _____
- c) What fraction of an inch would we call 8 of these equal sections? _____

Look at your ruler again and find the place that shows $\frac{8}{16}$ th of an inch. Then look at your drawing and mark the $\frac{1}{2}$ inch place with a colored marker.

- d) Is it the same as the $\frac{8}{16}$ th place? _____
- d) On your drawing, what two fractions name the same amount? _____

4. Sam measured a string and reported that it was $5 \frac{3}{4}$ inches in length. Use your ruler to draw a line in the box below that is the length of this string.

Melanie also measured the same string and reported that it was $5 \frac{9}{16}$ inches in length. She thought that Sam must have made a mistake in his measurement. Draw a line that is the length that she measured.

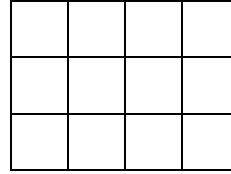
Sam's string:

Melanie's string:

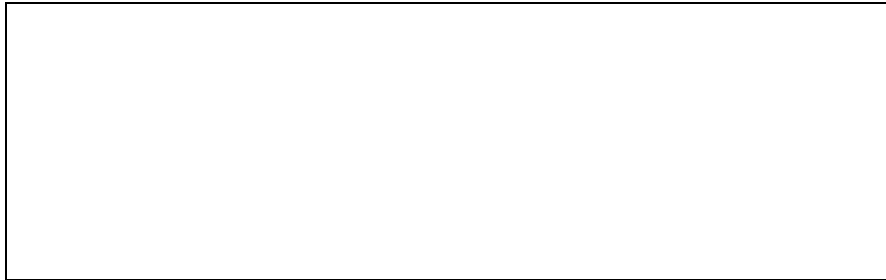
What would you tell Melanie about her idea that Sam made a mistake in his measurement?

5. Hanna and Ryan are very competitive. When their father gave them some candy, they both tried to see who would have the most left over at the end of the day.

Their father gave them each the same type of chocolate bar that was partitioned into 12 small squares that looked like this →

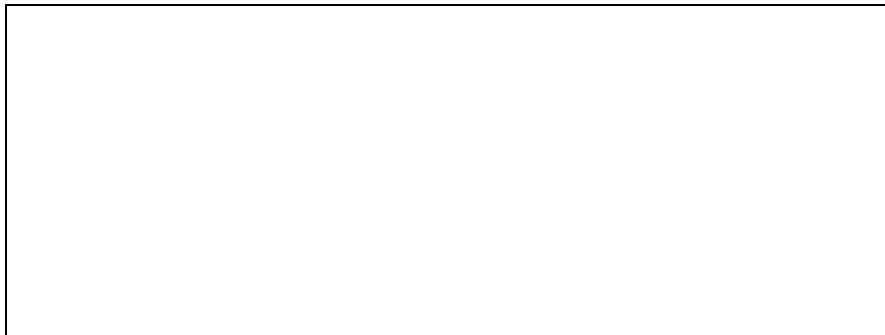


a) Make a drawing of the chocolate bar Hanna received.



At the end of the day, Hanna said that she still had $\frac{2}{3}$ of her chocolate bar left. With a marker, color in your drawing to show the part of the chocolate bar that Hannah had left.

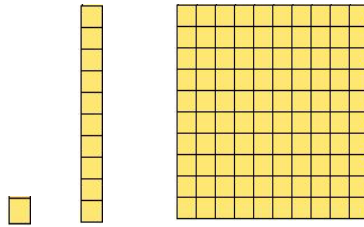
b) Make a drawing of Ryan's chocolate bar.



d) Color in your drawing to show the part of the chocolate bar Ryan had left.

Ryan thought that he had won the contest because he still had 8 little squares of the chocolate bar. Was Ryan right in saying that he had won the competition because he had more chocolate left than Hannah?

e) Explain why or why not?



6. Take the flat from your Base Ten blocks. Cover up $\frac{1}{2}$ of the flat with the small cubes.

a) How many small cubes did you use? _____

Since you used 50 cubes to cover $\frac{1}{2}$ of the 100 flat, we can also say that 50 of the 100 or $\frac{50}{100}$ is the same as $\frac{1}{2}$.

Now cover $\frac{1}{2}$ of the flat with rods (longs).

c) How many rods did you use? _____

d) How many rods would you need to cover the whole flat? _____

Since you used 5 rods to cover $\frac{1}{2}$ of the flat, we could also say that 5 of the 10 or $\frac{5}{10}$ is the same as $\frac{1}{2}$.

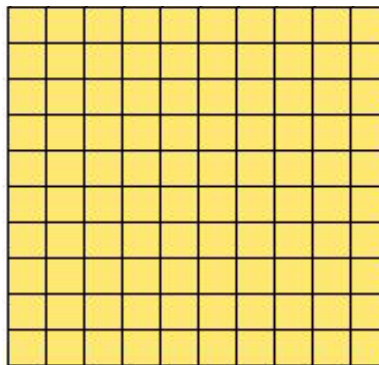
e) Use your counters and prove that $\frac{1}{2} = \frac{5}{10} = \frac{50}{100}$?



7. Seth had 3 dimes and Liz had 30 cents.

[Think of the flat as being \$1.00 (one dollar).]

On the flat to the right, use a marker and color in the rows to show Seth's money.



a) How many rows did you color? _____

b) What fraction amount of a dollar is 3 dimes? Write the fraction. _____

Mark an X on each cube to show Liz's amount of money.

c) How many cubes did you mark with an X? _____

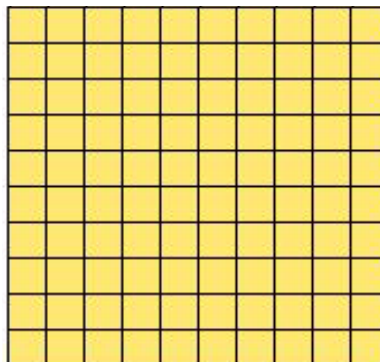
d) What fraction amount of a dollar is 30 cents? Write the fraction. _____



8. Nell thought that she was very rich because she had $\frac{4}{10}$ ths of a dollar. Todd thought that he was richer because he had 44 cents.

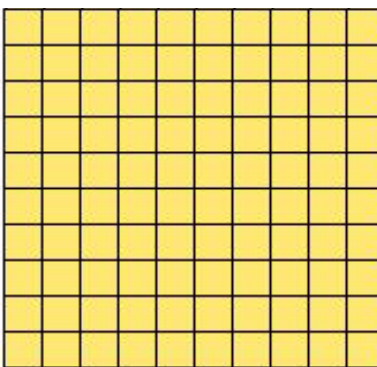
Use your marker and color in and Nell's amount of money. Put an X on the cubes to show Todd's amount.

b) Who actually had more money? _____

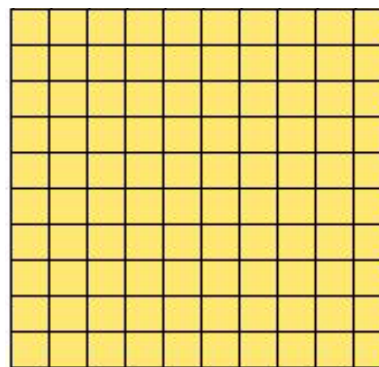


Nell has $\frac{1}{4}$ th of a dollar and Todd has 25 cents. who has more? _____

Shade in the money amounts and explain your answer below.



Nell's has $\frac{1}{4}$ of a dollar.



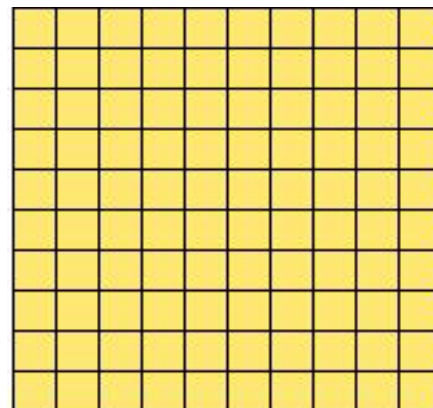
Todd has 25cents.

9. Dan had $\frac{1}{2}$ a dollar and his dad gave him $\frac{2}{4}$ ths of a dollar more.

a) What fraction of a dollar does Dan have altogether? _____

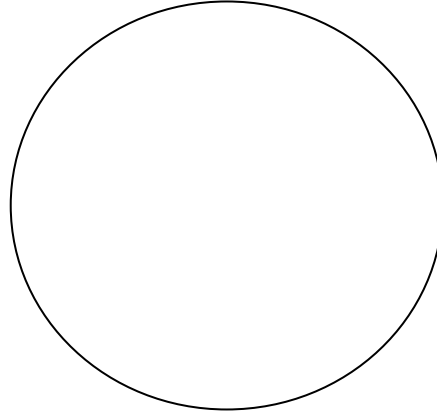
Shade in these amounts with different colors when solving this problem.

b) How many cents does Dan have? _____

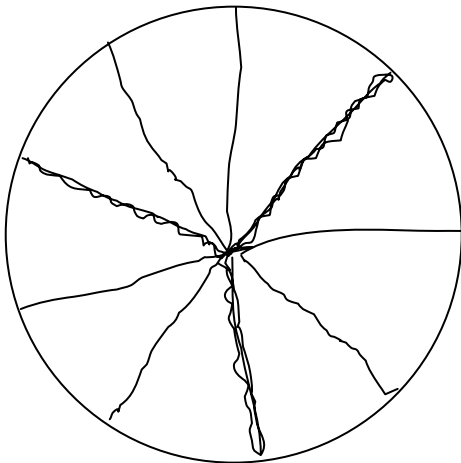


Remember: Fractions like $\frac{1}{2}$ (one-half) and $\frac{2}{4}$ (two quarters), which are the **same amount** but have a **different name**, are called **equivalent fractions**.

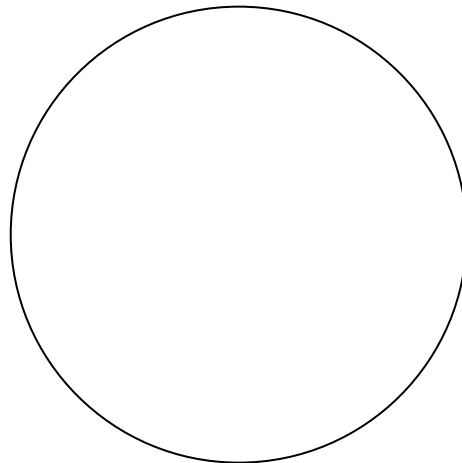
10. Partition the circle below that to show that fractions like $1/3$ and $2/6$ are **equivalent fractions**.

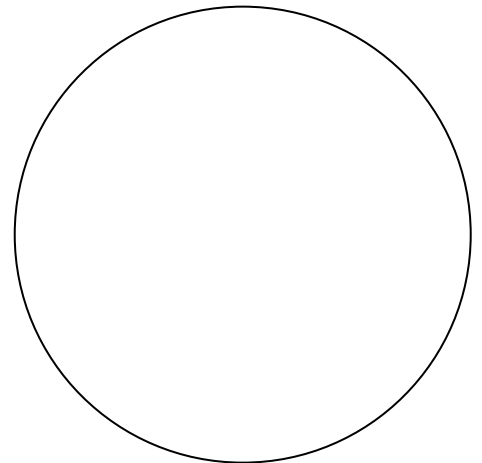


11. Make drawings to show two more equivalent fractions for $1/3$ and label each fraction.



$1/3 = 3/9$





12. Partition the rectangles below to show below to show equivalent fractions for $1/5^{\text{th}}$.



