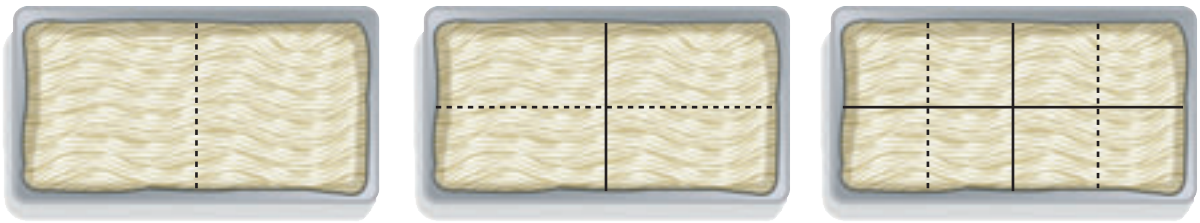
Cutting It

You need ☑ paper circles and rectangles (optional – see copymaster)
☑ scissors (optional) ☑ a classmate

Activity

Mrs Cook's visitors love her shepherd's pie. When she has 8 people for tea, Mrs Cook cuts up her pie like this:



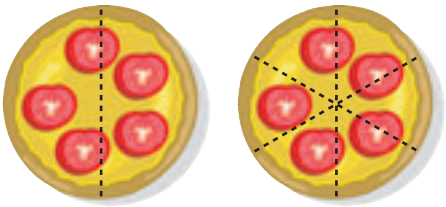
1. a. What is Mrs Cook's strategy for making sure the pieces are equal?

   b. Draw two other ways of cutting the pie into 8 equal pieces.

   c. Draw pictures to show how she would cut a shepherd's pie into:

   i. sixths ii. twelfths iii. tenths.

2. Mrs Cook is also famous for her quiches. When there are 6 people for tea, Mrs Cook cuts up a quiche like this:



Draw pictures to show how she would cut up a quiche into:

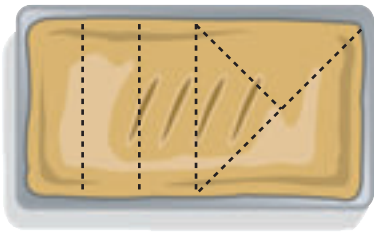
a. sixteenths b. eighteenths c. twentieths.

3. Mrs Cook's son, Doug, has cut a quiche like this. His sister, Annie, is not happy.

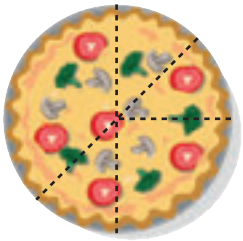
Who do you think is right? Explain your answer.

4. Here are some other pies and quiches that Doug has cut up. What fractions are in each? Explain your answers.

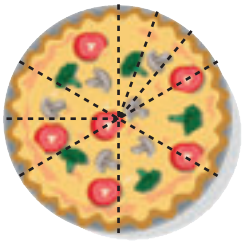
a.



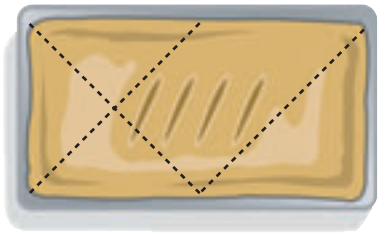
b.



c.



d.



5. Draw pictures to show how you would cut up a rectangular pie or a circular quiche to match these instructions from Annie.

a. Cut a pie so that 2 pieces are $\frac{1}{3}$ each and 3 pieces are $\frac{1}{9}$ each.

b. Cut a quiche so that 1 piece is $\frac{1}{4}$, 2 pieces are $\frac{1}{8}$ each, and 3 pieces are $\frac{1}{6}$ each.

c. Cut a quiche so that 4 pieces are $\frac{1}{8}$ each and 5 pieces are $\frac{1}{10}$ each.

d. Cut a pie so that 1 piece is $\frac{1}{3}$, 2 pieces are $\frac{1}{6}$ each, and 4 pieces are $\frac{1}{12}$ each.

6. Make up two pie- or quiche-cutting problems for a classmate to solve.