

Sharing Problems and Birthday Cakes

October 14th, 2018

Warm up

A man traveling with a fox and two chickens needs to cross a river. The man finds a small boat that can carry only one person and one animal. If he leaves the fox alone with a chicken, the fox will eat the chicken. How can all of them cross the river safely?

Sharing Problems

1. Anna and Bob have the same number of books. Clara has 6 books more than Anna. How many books should Clara give to Anna and to Bob so that all of them have the same number of books?

Draw a picture:

- Anna:
- Bob:
- Clara:

How many “extra” books are there?

Answer: Clara should give Anna books.

Clara should give Bob books.

2. Peter, Rick and Sam are collecting coins. Rick has 1 more coin than Peter. Sam has 4 more coins than Rick. Sam wants to give some coins to the other boys so that each of them has the same number of coins.

Draw a picture:

- How many “extra” coins are there?
- How many “extra” coins should each boy have in the end?

Answer: Sam should give Peter coins. Sam should give Rick coins.

Cutting the Birthday Cake

1. What shapes do birthday cakes usually have?
Draw at least three different shapes.

2. Cut each of your birthday cakes with one straight cut (draw a line).
Under each cake, write down how many pieces you get.

3. Clara's mom baked a cake for her birthday.
Clara noticed that she could cut it into 3 pieces
by making just one straight cut.
How could this cake look like?
Draw several examples.

Homework¹

1. Make up your own problem about sharing. Solve the problem. Write it down on an index card and bring to the class next time. Your parents can help you writing down the problem.

¹parents can read and explain the problems to the children