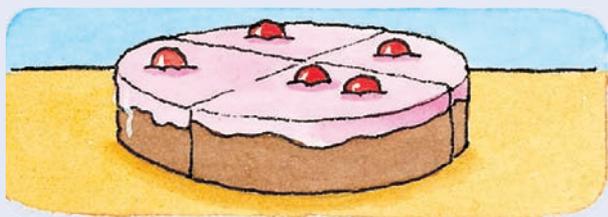


Solving the problem

- Put on the apron and hat. Greet the class in role as Mrs (or Mr) Muddle. Tell them about yourself. Explain that you would like the children to help you sort out your latest muddle, otherwise you might lose your job at the bakery!
- Invite the class to sit in a circle. Spread the 20 pieces of cake on the floor. Ask different children to make a cake with five cherries on top. Make sure that all the children understand that there are lots of ways of making five.
- Explain to the children that you would like them to try and use all the pieces of cake to make five cakes, each with five cherries on the top. Pick different children to make a cake until the task has been completed successfully, or you are left in a position where the remaining pieces of cake cannot be put together to make a cake with five cherries. If this happens, praise the children for their efforts but explain that they must break up some or all of the cakes and experiment with different ways of putting the pieces of cake together.
- Once the five cakes have been correctly assembled (there is more than one solution) thank the children for their help.



- Read the problem with the class and explain how the children have solved this problem using the plates and tissue paper cherries. Explain that the children are now going to get the opportunity to find another way of solving the same problem, this time using the pieces cut from photocopyable page 75. Organise the children to work in pairs or small groups. Give each group a set of the 20 pieces from photocopyable page 75. Ask the children to reassemble the pieces of cake to make five cakes, each with five cherries on top. Explain that there are a number of possible solutions to the problem.

- Offer the children support and encouragement as they are working. Encourage them to try different approaches and persevere until they have successfully completed the task. If a group gets to the last cake and has the wrong number of cherries left, demonstrate to the whole class how it may be easier to try and swap one or two bits of the puzzle round rather than breaking up everything they have done so far.
- With about ten minutes of the lesson to go, tell each group to stick their puzzle pieces down on a sheet of A4 paper.

Drawing together

Hold up one group's solution to the problem. Ask: *How can we check that this group have solved the problem correctly? Has anyone found a different solution to the problem?*

Support

Ask less-able children to rearrange the puzzle pieces to make as many cakes as they can with five cherries on top.

Extension

- Challenge the children to investigate how many other solutions they can find.
- Prepare a second puzzle for children who finish quickly. Adapt the photocopyable sheet by drawing an extra cherry on each cake. Challenge the children to make five cakes with six cherries on the top.

Further ideas

- Set the same problem in a different context. For example, put six fish in each pond or six pieces of topping on each pizza.
- Give each group of children five paper plates and ask them to devise a similar problem for another group to solve.