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w Libuszy



Education and Culture
Lifelong learning programme
COMENIUS

Learn & Play

How can parents learn Maths with
their child?

Poland



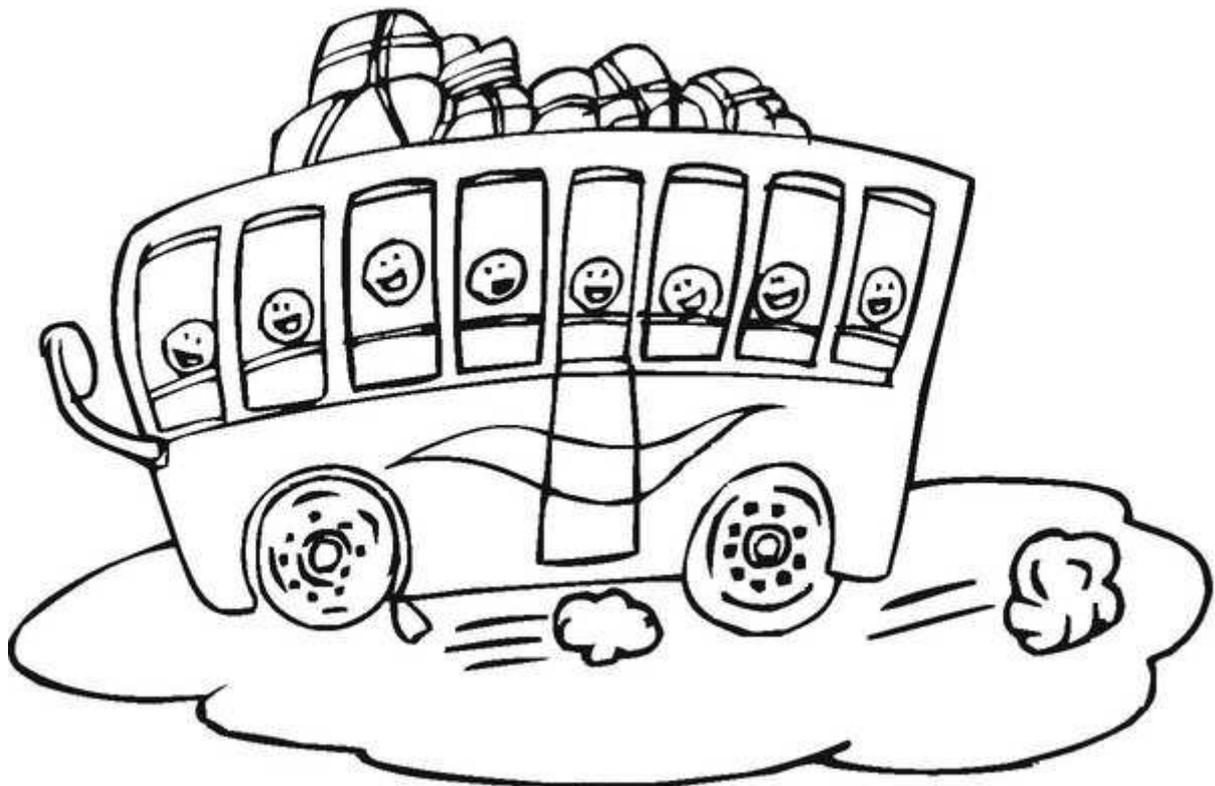
Meeting Italy 25/30 March 2011

Bus is coming! It is a kind of a memory game. Parent says a story about the bus going and the passengers getting off or on the bus. Child's task is to count the number of passengers on each bus stop - while it is increasing or decreasing constantly. Eventually the child has to give the final result. Parent says:

The bus is going. At the first stop 3 passengers get on the bus. At the second stop 4 passengers get on the bus while 2 passengers decide to get off the bus. How many passengers are now on the bus? The bus is still going. At the third stop 5 passengers get on the bus and 3 of them get off the bus. Next, at the fourth stop 1 passenger gets on the bus while nobody decides to get off. Eventually the bus is at the last stop - how many passengers get there?

I stop:	3
II stop:	$3+4-2=5$
III stop:	$5+5-3=7$
IV stop:	$7+1=\underline{8}$

The number of bus stops as well as of passengers can differ according to the child's skills.



Rolling the dice. A dice is needed. Both a parent and a child take turns and throw the dice twice, so that the number of 'pips' can be presented as sums. Each time the person, who rolls the dice, has to say his calculation and give the correct result. If someone counts incorrectly, then he is obliged to do it again.



The calculations can be written down to make the process of counting easier. It is suggested that there are six turns but it may differ, depending on the participants.

e.g.

$$\begin{array}{|c|} \hline \bullet \\ \hline \end{array} \quad \begin{array}{|c|} \hline \bullet \bullet \\ \bullet \bullet \\ \hline \end{array} \quad \begin{array}{c} \text{Child's sum} \\ 1 + 5 = 6 \end{array}$$

$$\begin{array}{|c|} \hline \bullet \\ \bullet \\ \hline \end{array} \quad \begin{array}{|c|} \hline \bullet \\ \bullet \bullet \\ \hline \end{array} \quad \begin{array}{c} \text{Parent's sum} \\ 2 + 3 = 5 \end{array}$$

Let's go mushrooming. Parents take their child for a walk. As they are walking through the forest, they are looking for mushrooms and picking only edible mushrooms. Each of the family members has his own bag of mushrooms. At home, all the participants together check how many mushrooms they were able to find and who has the largest number of mushrooms.

e.g.

Dad	14
Mum	11
Child	13

Next, they can classify each finding according to the kind of mushrooms

e.g.

Dad	Mum	Child
6 boletus	4 boletus	8 boletus
+	+	+
5 chanterelle	7 chanterelle	2 chanterelle
+	+	+
3 birch bolete	0 birch bolete	1 birch bolete
=14	=11	=13

As they have different numbers of mushrooms and sorts of them, they can make various calculations or classifications.

e.g.

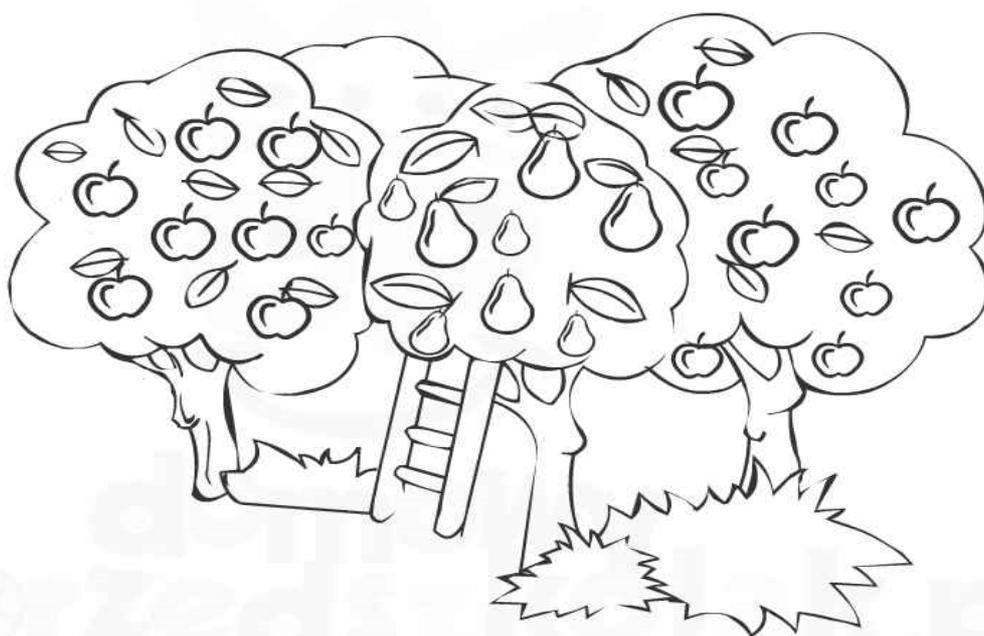
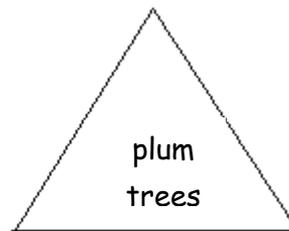
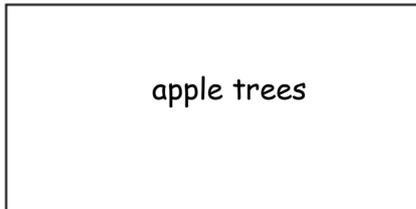
<i>Who found the largest number of boletus?</i>	<i>Child</i>
<i>How many mushrooms did mum pick?</i>	<i>11</i>
<i>Who did not pick any birch bolete?</i>	<i>Mum</i>
<i>Who picked the greatest number of mushrooms?</i>	<i>Dad</i>

(and so on)

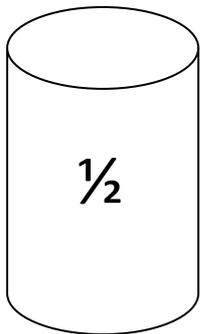
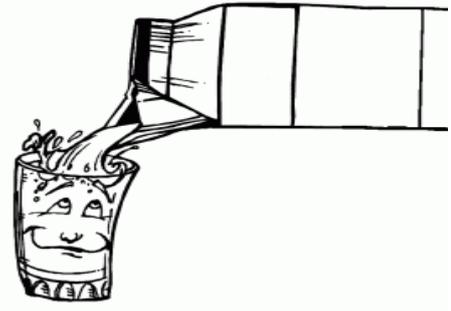


Planting fruit trees. This exercise is a good way to revise and practise geometric figures. Parents decide to plant new fruit trees in their orchard: apple trees, pear trees, cherry trees as well as plum trees. Each kind of trees has to be planted in the shape of different geometric figures.

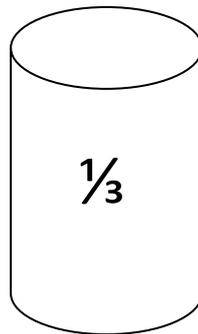
e.g.



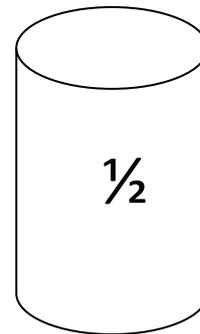
Juice in the glasses. Pouring the appropriate amount of juice to the glasses is an excellent way to teach children how to tackle fractions. Parent says the fraction e.g. $\frac{1}{2}$ of glass for grandmother, $\frac{3}{4}$ for grandfather, $\frac{1}{3}$ for mum, $\frac{3}{5}$ for dad, $\frac{1}{2}$ for you! Child's task is to pour this amount of juice for each member of family.



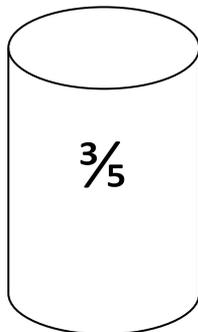
grandmother



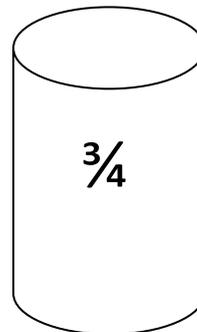
mum



child



dad



grandfather

Birthday is coming. The child wants to celebrate his birthday with friends from the kinder garden. He is going to take some sweets for all the group mates. Firstly, he has to think and count - how many sweets does he have to buy? e.g. There are 20 children in the group (together with him) and two teachers.

$20 \text{ children} + 2 \text{ teachers} = 22 \text{ people}$

He would like to give 2 sweets to everyone, so $22 \text{ people} \times 2 \text{ sweets} = 44$

Mum can write down 44 sweets on the shopping list.

