

# Mop Money



## Teaching place value and operations

MAB blocks can be used to help children develop concepts of place value and methods for performing operations. There are problems with this however. One is that the small cubes tend to fall off the table and this stuffs up the calculations. A more significant one is the cost involved in getting enough MAB for a class of children all to work on them individually or in small groups.

An alternative is monopoly money. For example, to start to build the concept of division, one might give four children \$638 (in monopoly money) and ask them to share it equally between them. The children might relate more to this than to sharing MAB blocks. After some exploration, trial and error and practice, children might come up with a general method for division like the following:

Suppose you want to divide 477 by 3. Deal yourself \$477 – as four \$100 notes, seven \$10 notes and seven \$1 notes. Imagine yourself and two friends. Deal out the \$100 notes as far as can be done equally. You get one each and there is one over. The one left over can't be shared so swap it for ten \$10 notes. You now have seventeen \$10 notes. Share these out. Everyone gets five and there are two left that cannot be shared. Swap the two leftovers for twenty \$1 notes. This gives you twenty seven \$1 notes. Share these out and find that you get nine each. So everyone gets one \$100 note, five \$10 notes and seven \$1 notes, ie. \$157. So  $477 \div 3 = 157$ .

The written algorithm mirrors this process exactly. Children can start using just the money. They can then proceed to using the money but recording the steps on paper. Then finally, they can imagine the money and work just on paper.

Note that the \$20 notes, \$50 notes etc. are not used because they complicate the process and make it different from the usual written algorithm. Monopoly doesn't have \$1000 notes or \$0.10 or \$0.01 notes. But if it did, these could be used to extend the method to four-digit numbers and to decimal fractions.

## Mop Money

Besides not having \$1000 notes or \$0.10 or \$0.01 notes, monopoly money, like MAB, is fairly expensive. An alternative is to make your own. Another alternative is to use the Mop Money on the next few pages. Photocopy the required pages as many times as necessary. Copy each denomination onto a different colour of paper, for example \$1000 – red, \$100 – orange, \$10 – yellow, \$1 – white, \$0.10 – green, \$0.01 – blue. Then cut up the sheets along the thick lines with a guillotine.

## Other uses

Mop Money can be used in similar ways for the operations of addition, subtraction and multiplication. It can also provide further activities for developing place value and decimal fraction concepts. Furthermore, it can be used as money for games and activities which require students to deal with money. Simulated gambling activities can help students see the folly of gambling as well as developing concepts in probability.

## Funny name

Three major uses of Mop Money are: as play **M**oney; to develop **O**perations; and to develop **P**lace value concepts. Hence the name.

**One Thousand Dollars**

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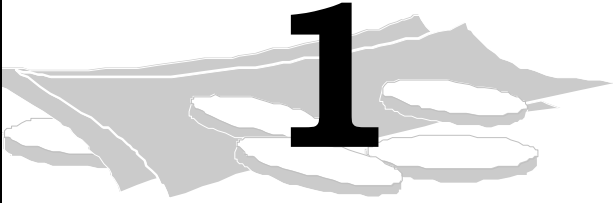
**Ten Dollars**

**Ten Dollars**

**10**

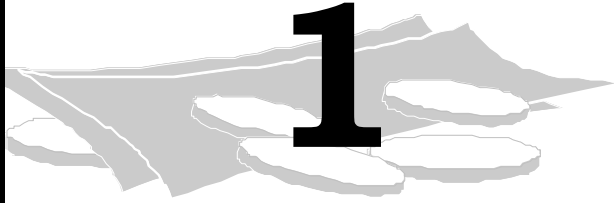
**Ten Dollars**

One Dollar



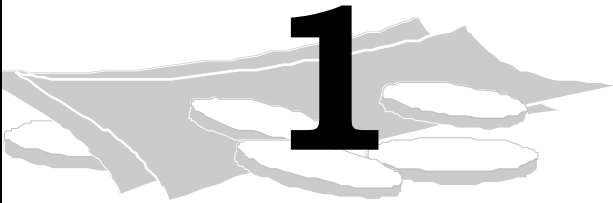
One Dollar

One Dollar



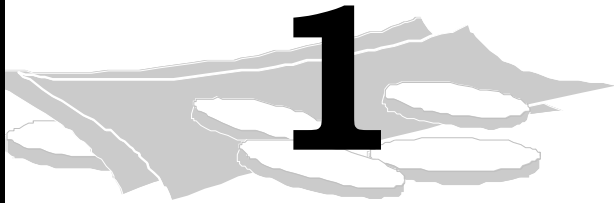
One Dollar

One Dollar



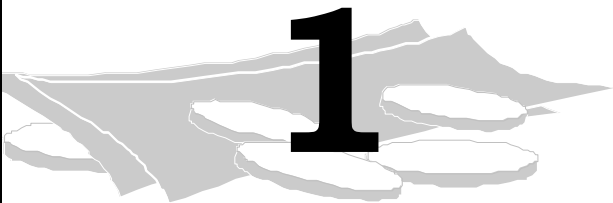
One Dollar

One Dollar



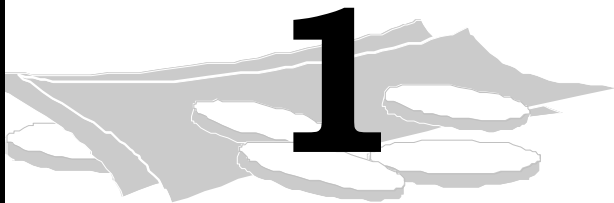
One Dollar

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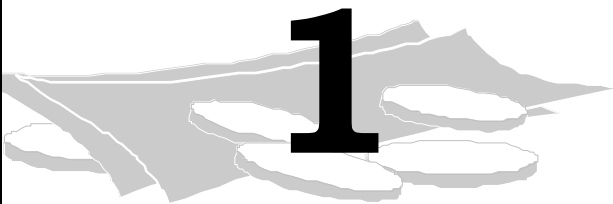
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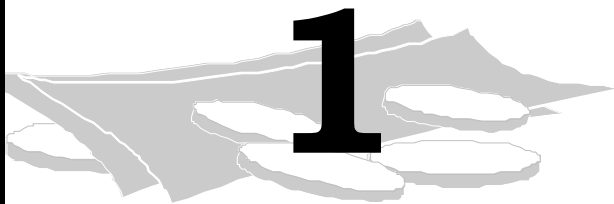
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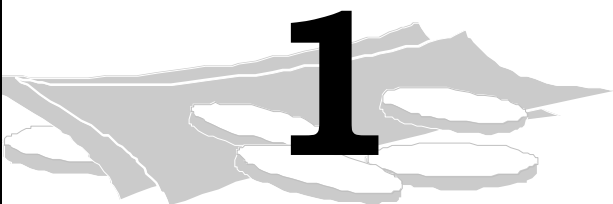
One Dollar

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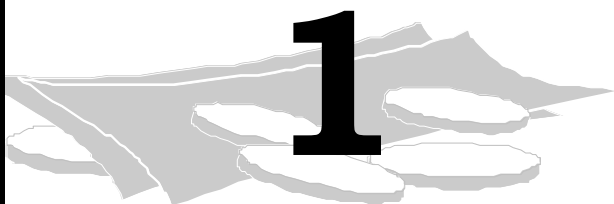
One Dollar

One Dollar



One Dollar

One Dollar



One Dollar

One Tenth of a Dollar

**0.10**

Ten Cents

One Tenth of a Dollar

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One Hundredth of a Dollar

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