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This book is designed to help students look at numbers and number concepts from a different perspective. Students will, therefore, gain a deeper understanding of these and strengthen their number skills.

The more familiar students are with numbers and the relationships between numbers, the more sense maths will make. The activities in this book will help students feel comfortable with numbers by letting the students make up the problems or parts of them. For example:

- Students can use what they know about subtraction to complete problems like these

$$\begin{array}{r} \square \\ - \square \\ \hline \square \end{array} .$$

- A child who is still getting used to smaller numbers might write this problem

$$\begin{array}{r} \square 23 \\ - \square 10 \\ \hline \square 13 \end{array} .$$

This child may need to use cubes or other manipulatives while working on the problems.

- A child who is comfortable with larger numbers might write

$$\begin{array}{r} \square 56 \\ - \square 14 \\ \hline \square 42 \end{array} \quad \text{or} \quad \begin{array}{r} \square 76 \\ - \square 14 \\ \hline \square 62 \end{array} .$$

This child may be thinking about patterns.

- Conversely, a child who writes $\begin{array}{r} \square 10 \\ - \square 23 \\ \hline \square 13 \end{array}$ is showing you that she or he needs help with writing subtraction problems.

This child may benefit from working with manipulatives while working on the problems.

You may want to introduce a page to your class and do a few problems together to get the students started, or you may want to let them *try a page on their own or with a partner*, and then *sum up the class's findings later*, encouraging them to look for patterns and to generalise. *(Students need opportunities to talk about their answers and the patterns they notice.)*

At first some students may be confused by problems that do not have just one right answer, but eventually most will enjoy creating their own problems. Students will also enjoy the puzzles that ask them to look for hidden sums, differences or number families. Students will appreciate interesting ways of 'practising the facts' instead of page after page of fill-in-the-answer problems.

As you use these pages you may find that some students need more practice with the idea of a particular page. In many cases, it is fairly easy for you to make another similar page, substituting different numbers.

The contents of this book are organised by operations and size of numbers. You will probably want to use the pages throughout the year, a few at a time, as you introduce new operations and higher numbers. You will enjoy seeing the students thinking more mathematically, writing their own problems, and looking for all the possible answers to a given problem. The students will enjoy the change of pace these pages provide for them and will grow in their understanding of maths while having fun.





Hidden Sums of 20

Name _____

- ▲ Loop 3, 4 or 5 numbers that equal 20.
- ▲ The numbers must be next to each other.
- ▲ Find as many as you can.
- ▲ You can use a number more than once.

5	2	15	4	9	8	5	3
10	13	4	3	15	11	4	10
12	7	9	1	8	12	15	3
7	4	17	8	1	2	0	11
11	1	2	13	6	14	10	6
2	14	7	0	11	12	8	0
5	5	10	8	9	7	13	11
6	3	9	14	0	6	12	1



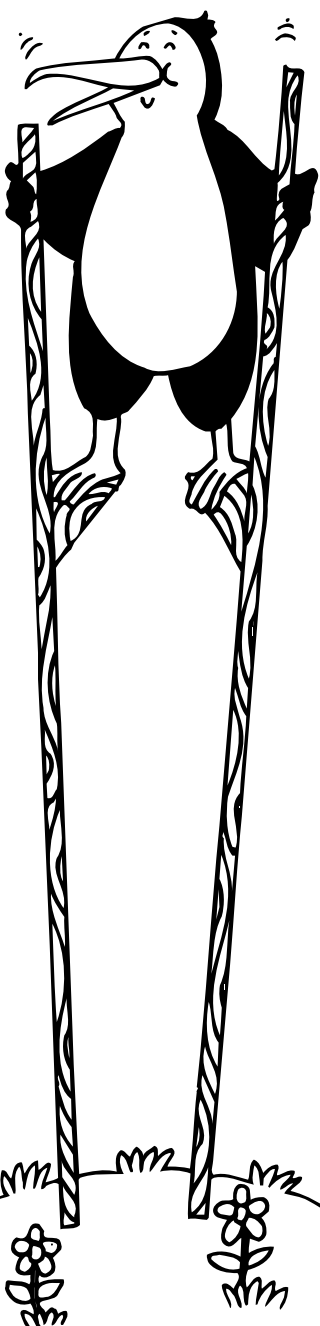


Dividing

Name _____

- ▲ Fill in the boxes to make each problem true.
- ▲ Do not use '0' or '1'.

$\square \div 2 = \square$
$\square \div 4 = \square$
$\square \div \square = 2$
$\square \div \square = 4$
$\square \div \square = 6$
$14 \div \square = \square$
$24 \div \square = \square$
$18 \div \square = \square$
$36 \div \square = \square$



$\square \div 3 = \square$
$\square \div 5 = \square$
$\square \div \square = 3$
$\square \div \square = 5$
$\square \div \square = 7$
$12 \div \square = \square$
$30 \div \square = \square$
$20 \div \square = \square$
$40 \div \square = \square$





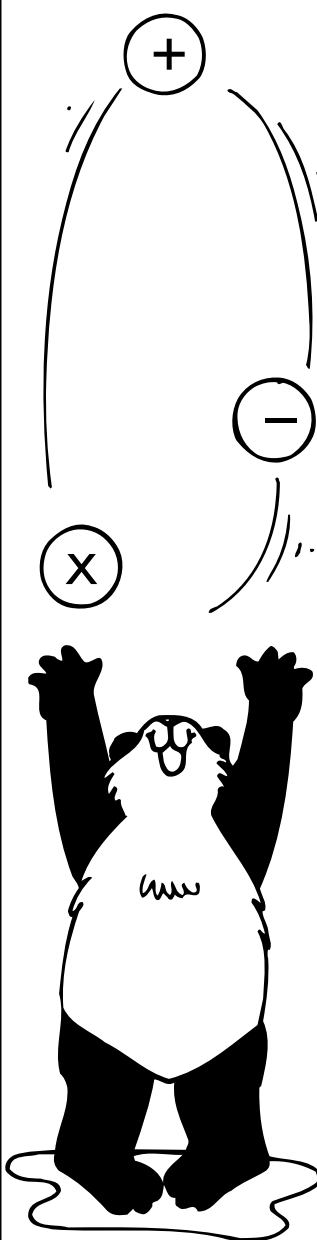
Missing Signs

Name _____

- ▲ Fill in each circle with +, - or x to make each sentence true.



$3 \bigcirc 7 = 10$
$6 \bigcirc 1 = 7$
$4 \bigcirc 4 = 16$
$9 \bigcirc 2 = 7$
$5 \bigcirc 4 = 9$
$4 \bigcirc 4 = 0$
$6 \bigcirc 6 = 36$
$7 \bigcirc 3 = 4$



$6 \bigcirc 1 = 6$
$9 \bigcirc 2 = 18$
$4 \bigcirc 4 = 8$
$3 \bigcirc 7 = 21$
$6 \bigcirc 6 = 12$
$5 \bigcirc 4 = 20$
$6 \bigcirc 1 = 5$
$9 \bigcirc 2 = 11$

