CONSTRUCTIVE EXPERIENCES WITH DECIMALS

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The first of a series of decimal exercises were published in the March 1979 issue of delta-k. *The following exercises are a continuation of the series.*

DECIMAL TASK SET 1:
Tenths, Hundredths, Thousandths

On your table you should have two flats divided into 100 congruent smaller squares, a number of longs, and a number of smaller cubes. You should also have one large cube.

1. If a long is considered as one unit, what fractional name would describe one of the small squares?

   Why?

2. Using longs and small cubes, illustrate the following:

   (a) 7/10

   (b) 3 6/10

3. Using longs and cubes, find the following:

   (a) 3 6/10 + 4 1/10

   (b) 2 5/10 + 1 7/10

   Explain your result:

   (c) 4 5/10 - 2 1/10

   (d) 1 7/10 - 9/10

4. Write a set of directions for children and have them answer the following using longs and squares:

   (a) 2 7/10 = /10

   (b) 13 4/10 = /10

   (c) 43/10 = 4 /10 = 3 /10

5. Sketch a cork board display which shows how to find the following results using longs and cubes:

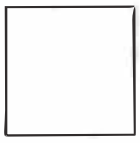
   11 ÷ 10

6. Change gears! Suppose a *flat* is now considered as a *unit*. What fractional name is now assigned to:

   (a) longs _____?

   (b) small cubes _____?

   (c) large cubes _____?



7. Using the materials, illustrate each of the following at least two ways:

   (a)

	flats (1)	longs (1/10)	cubes (1/100)
25/100			

   (b)

	flats (1)	longs (1/10)	cubes (1/100)
1 13/100	1	1	1

8. Develop a short *demonstration* for children to show them how to use the blocks to solve the following:

   (a) 1 3/10 + 27/100 =

   (b) 36/100 + 29/100 =

   (c) 4/10 + 3/100 + 49/100 =

   (d) 1/2 + 1/5 + 3/20 =

9. Using the materials, show two fractions equivalent to the following:

   (a) 1/2 5 longs (5/10) 50 cubes (50/100)

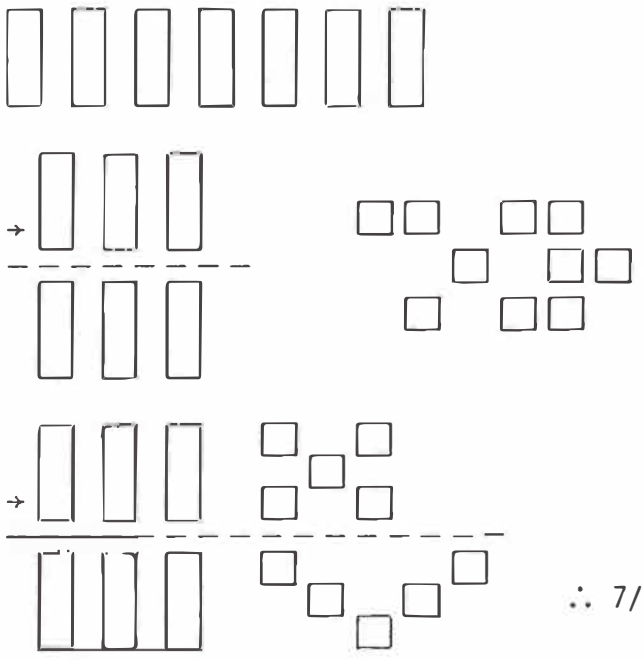
   (b) 1/4

   (c) 2/5

   (d) 3/4

   (e) 7/20

10. The diagram below shows 7/10 ÷ 2.



∴ 7/10 ÷ 2 = 35/100.

Sketch diagrams for the following:

(a) 8/10 ÷ 5

(b) 1 8/10 ÷ 5

(c) 25/100 ÷ 5/10
(Can you think of an equivalent division question?)

11. Change gears one more time. Suppose the large cube is a unit. What is a sequence of activities for children which will lead up to their being able to do the following:

(a) 37/100 + 25/1000 + 5/10

(b) 2 ÷ 3

The purpose of this task set has been to show a way of providing meaning to fractions which relate to decimals, to show physically the simplicity of the decimal operation of adding, and to show experiences relating decimal fractions to other fractions.