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RIGHTSTART™ MATHEMATICS

by Joan A. Cotter, Ph.D.

**DIVISION LESSON
EXCERPTS**

TRANSITION LESSONS

Special thanks to Dustin Sailer who restructured and updated this manual.

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www.ALabacus.com

For more information:
info@ALabacus.com

Supplies may be ordered from:
www.ALabacus.com
order@ALabacus.com

Activities for Learning, Inc.
PO Box 468
321 Hill St.
Hazelton, ND 58544-0468
USA
888-775-6284 or 701-782-2000
701-782-2007 fax

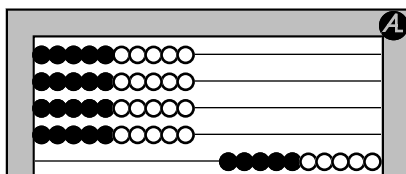
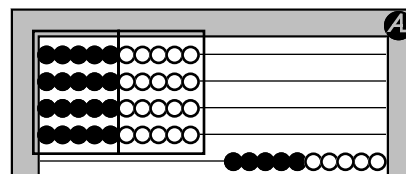
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Lesson T47

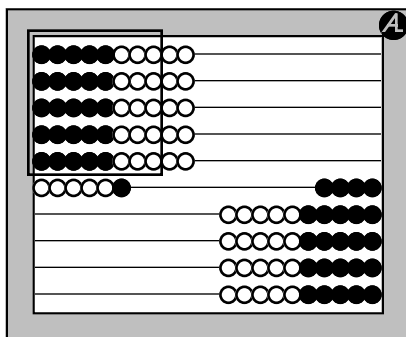
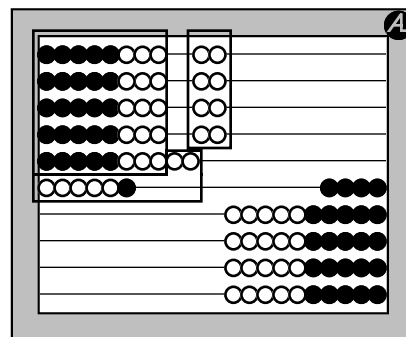
Division

- OBJECTIVE** 1. To use the abacus to find division facts
2. To use the multiples patterns to find quotients
- MATERIALS** Abacus
Worksheet T18, Division
Cards and envelopes for playing Division Memory, D2
- WARM-UP** Ask the child to enter 9×7 on the abacus and to find the value. Repeat for 7×8 and 6×4 .
- ACTIVITIES** **Dividing 40 by 5.** Ask the child to write 40 divided by 5. [$40 \div 5$] Then ask her to enter 40 on the abacus, shown below on the left, and to find groups of 5s. Because the beads are grouped in 5s, the answer is obvious. See the right figure below.

Finding $40 \div 5$.The groups of 5 so $40 \div 5 = 8$.

Dividing 56 by 8. Next ask the child to try 56 divided by 8. After she enters 56 on the abacus, ask her for groups of 8s. One way is to see 5 groups, shown below on the left, and noting 16 leftover. The 16 is two more groups, giving a total of 7.

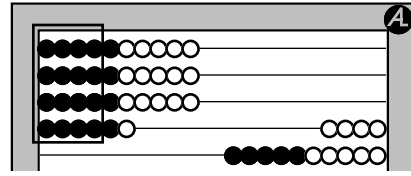
Or, the 16 beads could be visually grouped into two more groups of 8 as shown below on the right.

To find $56 \div 8$, see 5 groups of 8 with 16 left over.The 16 divided into 2 groups of 8 (2×4 and $6 + 2$).

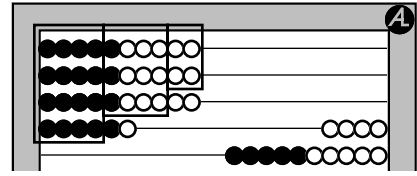
To relate the division fact with the multiples patterns, as the child to find 56 on the 8s multiples envelope. What position is it in? [7] Why is that? [$8 \times 7 = 56$]

8	16	24	32	40
48	56	64	72	80

Dividing 36 by 4. For one last example, ask the child to find $36 \div 4$. Find the first four groups of 4 as usual; see the left figure below. But there are three more groups of 4 on the same wires. See the right figure. The total number of groups is $4 + 3 + 2 = 9$.



Finding $36 \div 4$.



The groups of 4 so $36 \div 4 = 8$.

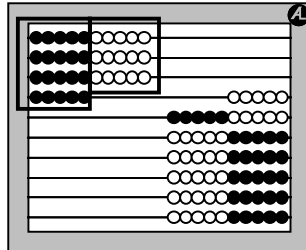
Ask her to find the position of the quotient (the division answer) on the 4s multiples patterns. [9th position]

4	8	12	16	20
24	28	32	36	40

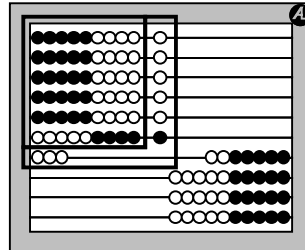
Division Memory game. Play game, Division Memory, (*Math Card Games*, D2). This is a fun way to practice division facts using the multiples patterns.

Worksheet T18. The worksheet has nine examples for using the abacus to find quotients. Solutions are below. The child is also asked to choose three additional facts, preferably some that are difficult for her.

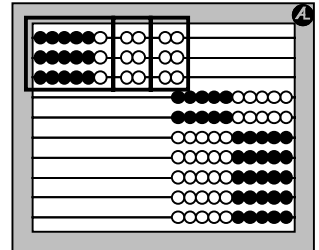
$$35 \div 5 = 7$$



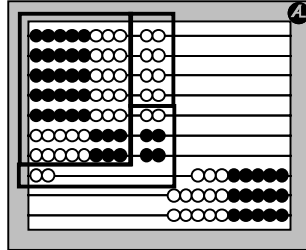
$$63 \div 9 = 7$$



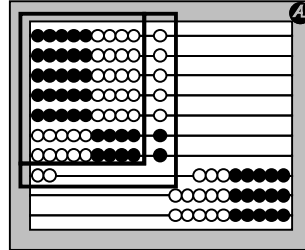
$$30 \div 6 = 5$$



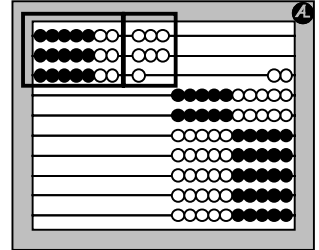
$$72 \div 8 = 9$$



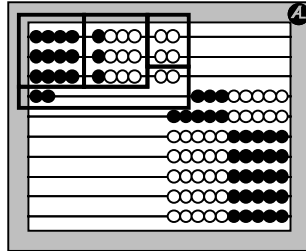
$$72 \div 9 = 8$$



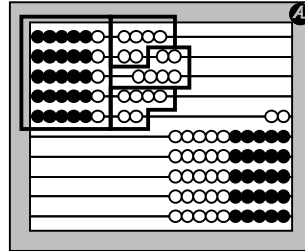
$$28 \div 7 = 4$$



$$32 \div 4 = 8$$



$$48 \div 6 = 8$$



$$64 \div 8 = 8$$

