Everyday Math

LESSON № 9.11

Notes on Using Digi-Block with Everyday Math

Connection

In **Section 1** (Teaching the Lesson), students extend the partial products method to **products of 2 digit numbers and 2 digit multiples of 10**. Students can see the partial products using Digi Blocks and a place value mat, or use their knowledge of basic facts and the shift when multiplying by multiples of 10.

Materials

- single blocks and packed blocks
- place value mat and digit cards

Lesson

- Review the partial products algorithm by asking a volunteer to set up 4 groups of 333 in packed blocks on a place value mat. List the three partial products in the algorithm. Ask one student to add them up and another to pack up the blocks to check the product.

- When discussing the problem 20 x 13 during the whole class activity, remind students that they can use their knowledge of basic facts and shifts in place value to produce the partial products. Ask: **How would we divide up 13 according to place value, or tens and ones?** (10 + 3) **How many shifts will there be if we multiply 20 x 10?** (We can multiply 2 x 1 and shift 2 places larger = 200, or shift 20 once = 200) **How many shifts will there be when we multiply 20 x 3?** (1. We can multiply 2 x 3 = 6 and shift once, 60 or see the 6 blocks of 10.)

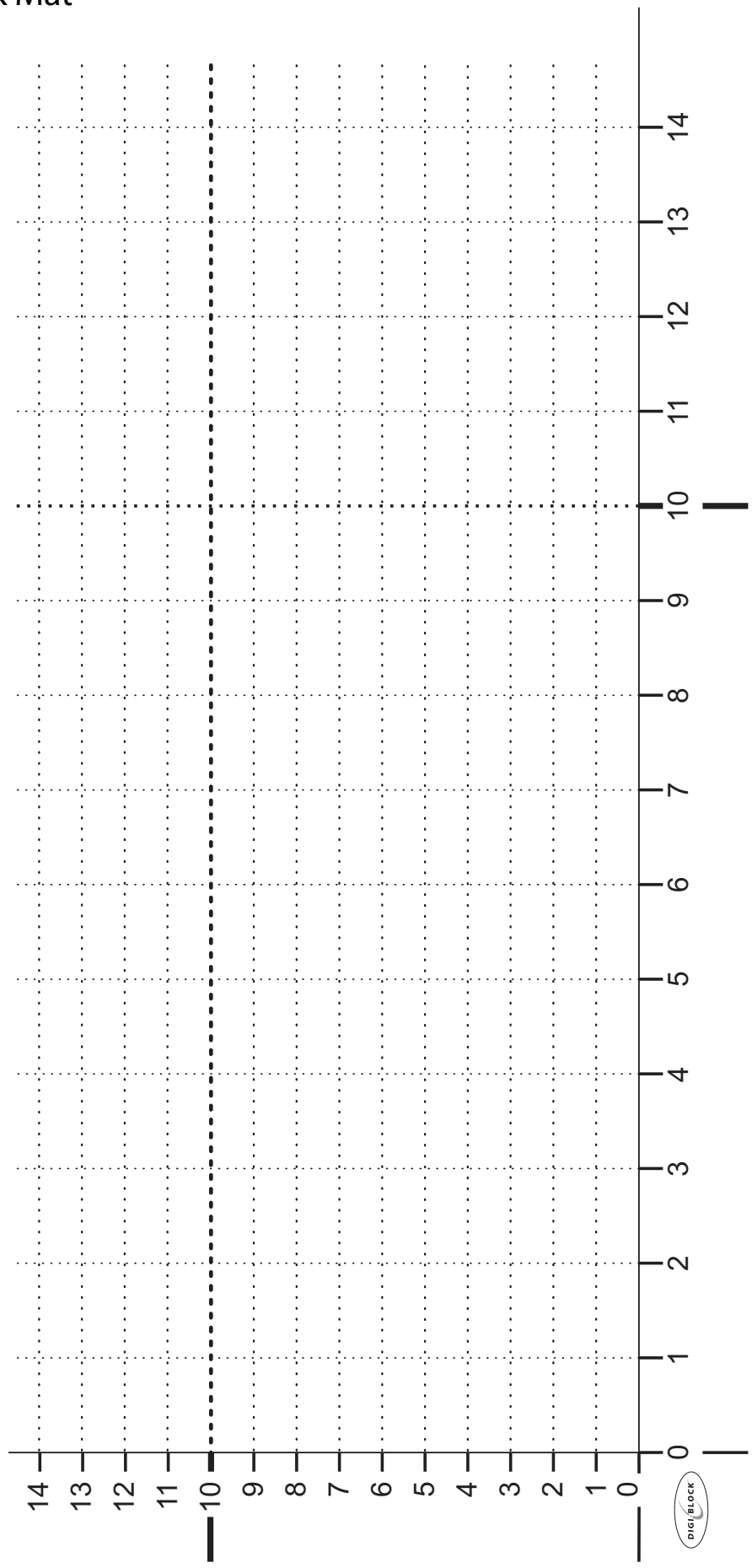
- If you feel your students are not ready to figure out the partial products as described above, both partial products can be set up on a place value mat: 20 groups of 10—pack/regroup to 200, and 20 groups of 3 (or better yet, 3 groups of 20).

- Practice together the algorithm for 18 x 30, using either of the procedures described above to obtain the partial products.

ACTIVITY SHEET

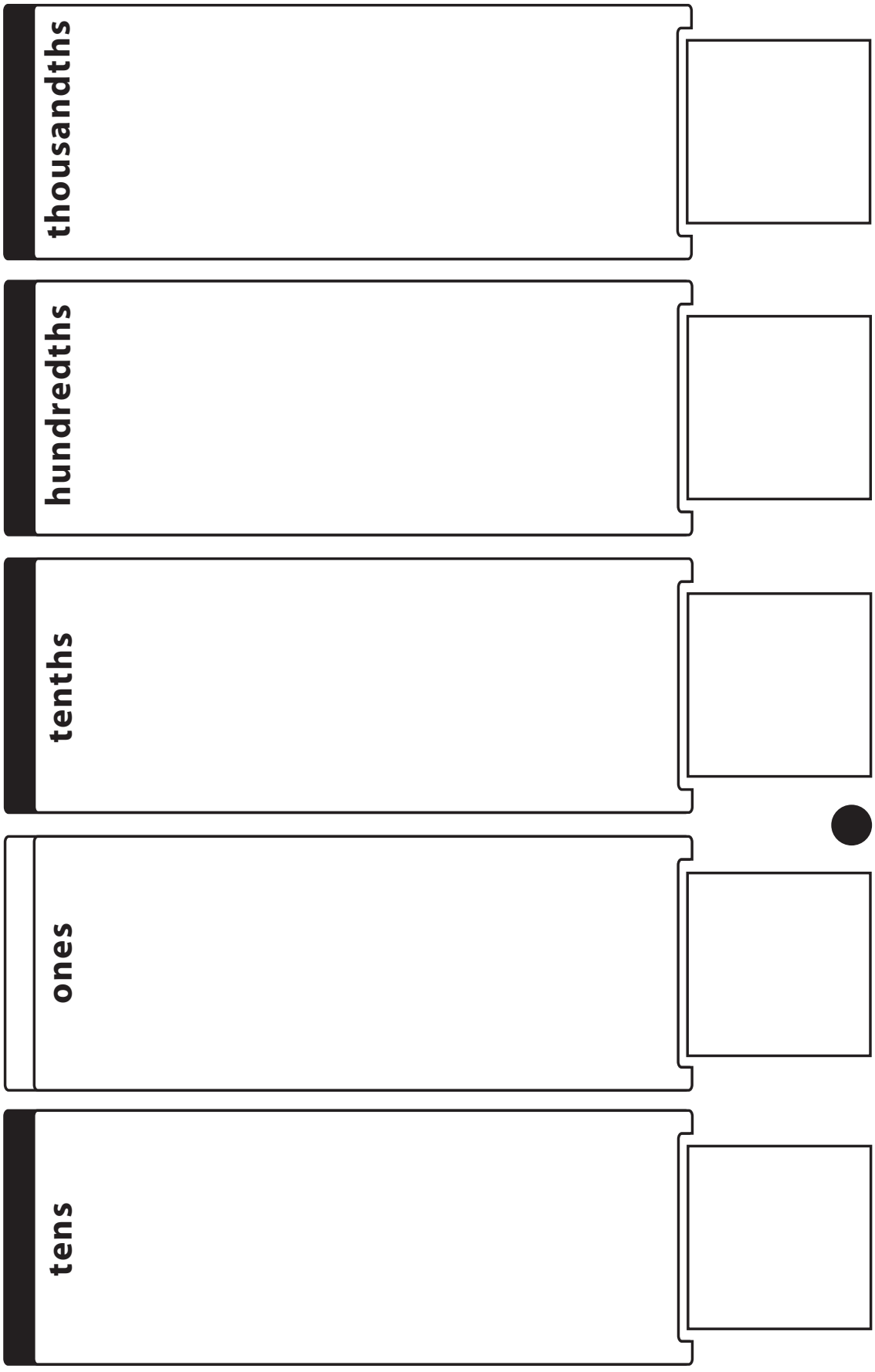
Name_____

Array Work Mat



Name _____

Decimal Place Value Mat



ACTIVITY SHEET