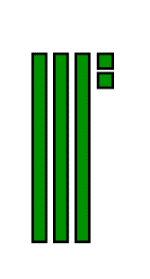
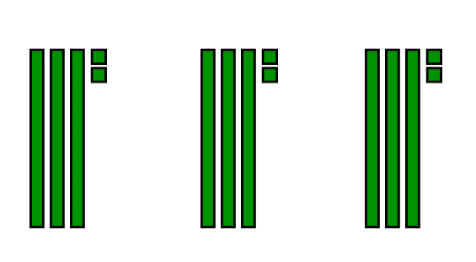
***Sticks in Dominos***

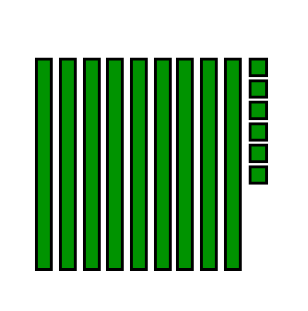
Diagrams for 1x2 digit multiplication

We can model “32” by drawing place value blocks like this example. The bars represent tens, and the small squares represent ones.

1) Draw a model of 43.

We could model 3 \* 32 like this example

2) Draw a model of 2 \* 43.

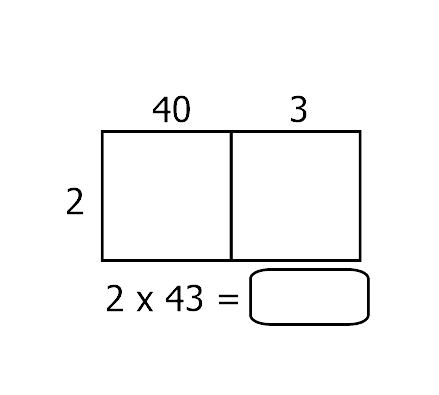


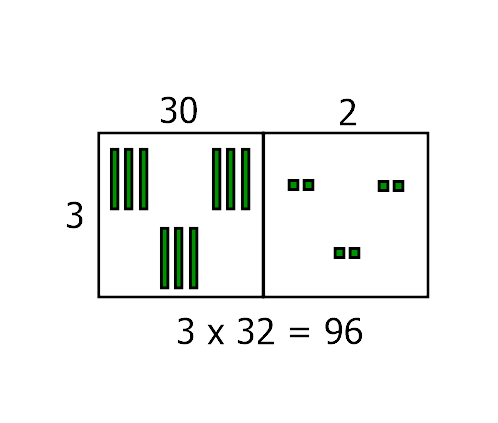
But how do we see the product? (Remember that a **product** is an answer to a multiplication question.) It’s helpful to sort the blocks to group tens together and ones together.

So 9 tens and 6 ones makes 96.

3 \* 32 = 96

3) Re-draw your model of 2 \* 43 with the tens grouped together and the ones grouped together.

4) What is the result?

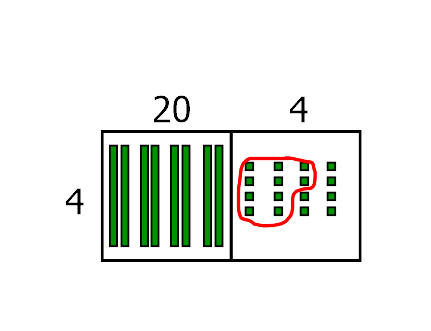
We can save time if we group the tens and ones in the first step. A frame is helpful. In Mr. Z School, we call this frame a “domino”. The example domino on the left shows 3 \* 32.

5) Copy the domino on the right and fill it out to show 2 \* 43.

6) Draw a domino to model 7 \* 11

7) Draw a domino to model 3 \* 33

**In big kid math, we have to regroup**

So far, we’ve used pretty small numbers. This example shows what happens if we need to regroup some ones to make another ten.

Draw a model for 4 \* 24.

Notice that we have a group of ten.

8) How many tens in total? 9) How many ones? 10) What is the final product?

**Practice**

For each problem, draw a domino to model the multiplication.

11) 5 \* 13 12) 2 \* 57 13) 6 \* 14

14) 8 \* 21 15) 9 \* 22 16) 16 \* 6

17) 3 \* 132 (Hint: Most people draw a large square to represent 100)

18) 4 \* 241

19) 2 \* 1,343 (Draw 1,000 any way you want. Some people draw a cube.)

20) 6 \* 8 ½

21) Check your answers to all questions so far.

**Notes**

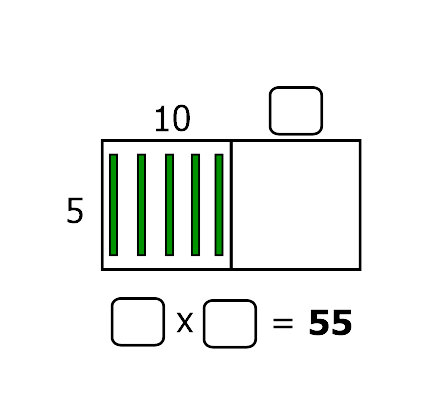
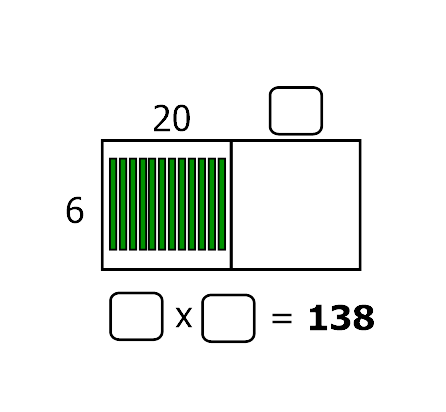
Choose two questions from the “Practice” section to copy into your notes.

**Challenge Section**

For questions #21 through #23, draw a domino model for the multiplication question.

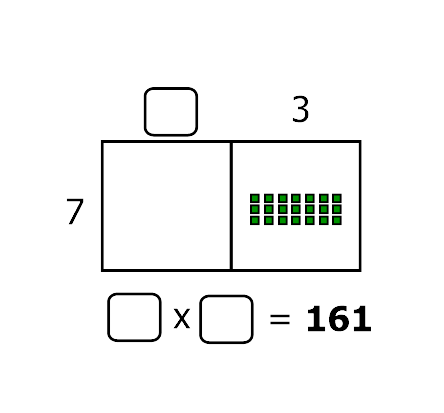
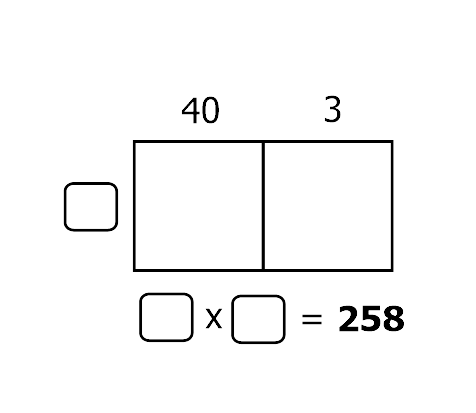
21) 6 \* 2,657 22) 5 \* 10 ½ 23) 8 \* 2 ¼

For questions #24 through #28, copy the dominos and fill in all blanks.



**25)**

**24)**



**27)**

**26)**