## Unit 5 Lesson 11: Dividing Numbers that Result in Decimals

### 1 Number Talk: Evaluating Quotients (Warm up)

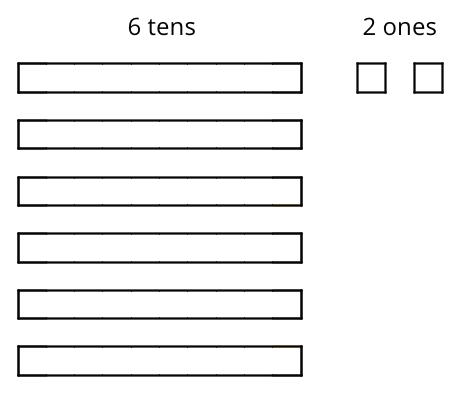
#### Student Task Statement

Find the quotients mentally.

### 2 Keep Dividing (Optional)

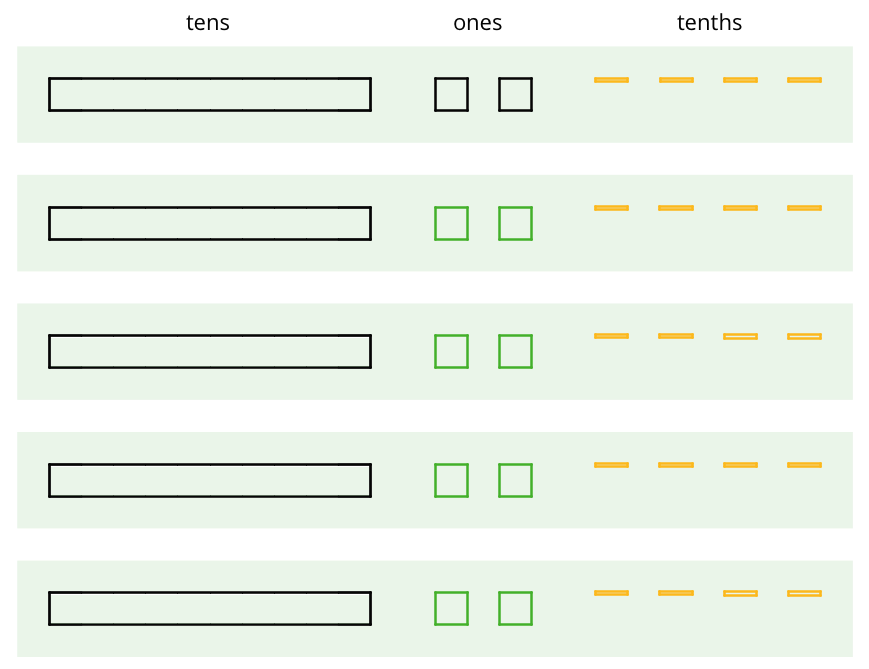
#### Student Task Statement

Mai used base-ten diagrams to calculate . She started by representing 62.



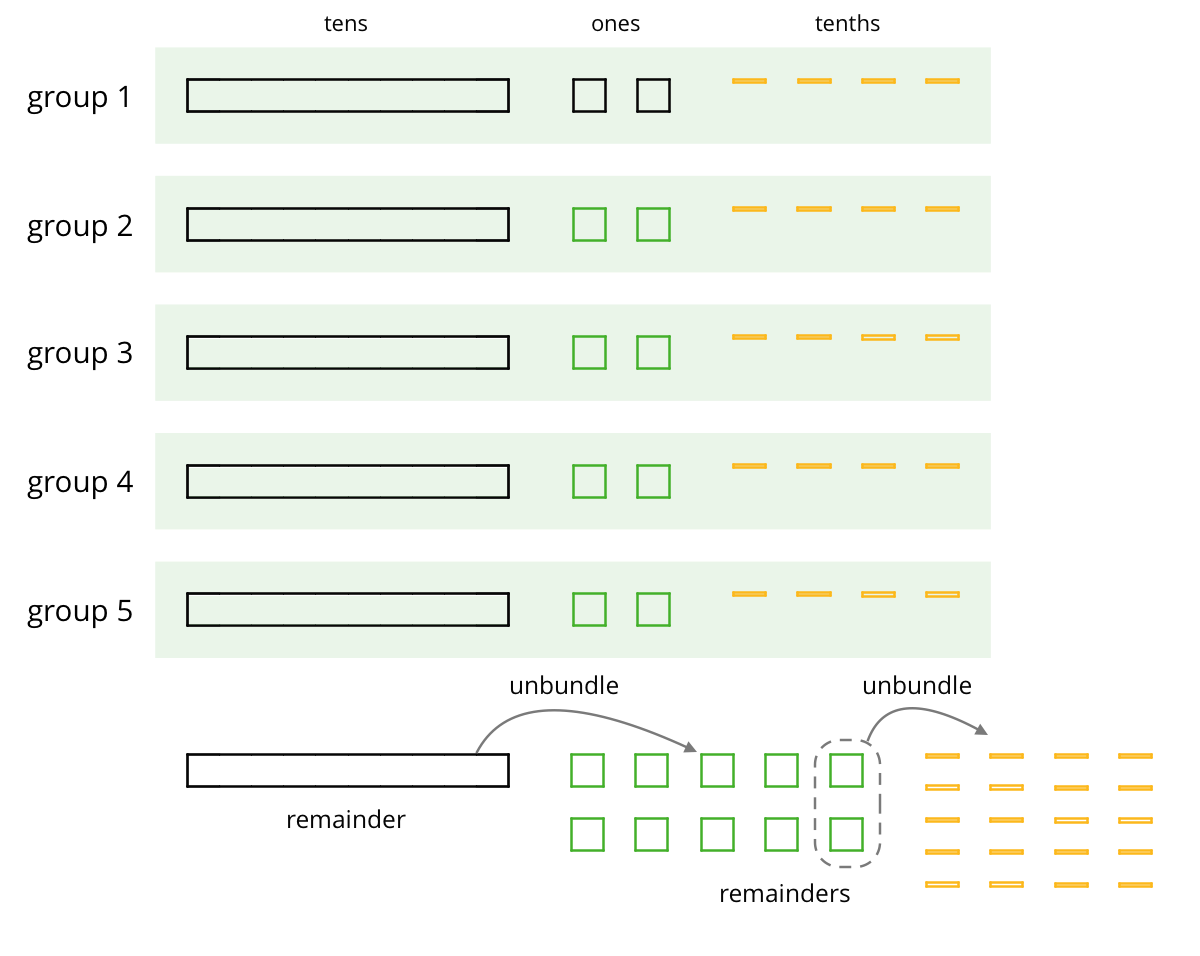
She then made 5 groups, each with 1 ten. There was 1 ten left. She unbundled it into 10 ones and distributed the ones across the 5 groups.

Here is Mai’s diagram for .



1. Discuss these questions with a partner and write down your answers:
   1. Mai should have a total of 12 ones, but her diagram shows only 10. Why?
   2. She did not originally have tenths, but in her diagram each group has 4 tenths. Why?
   3. What value has Mai found for ? Explain your reasoning.
2. Find the quotient of by drawing base-ten diagrams or by using the partial quotients method. Show your reasoning. If you get stuck, work with your partner to find a solution.
3. Four students share a $271 prize from a science competition. How much does each student get if the prize is shared equally? Show your reasoning.

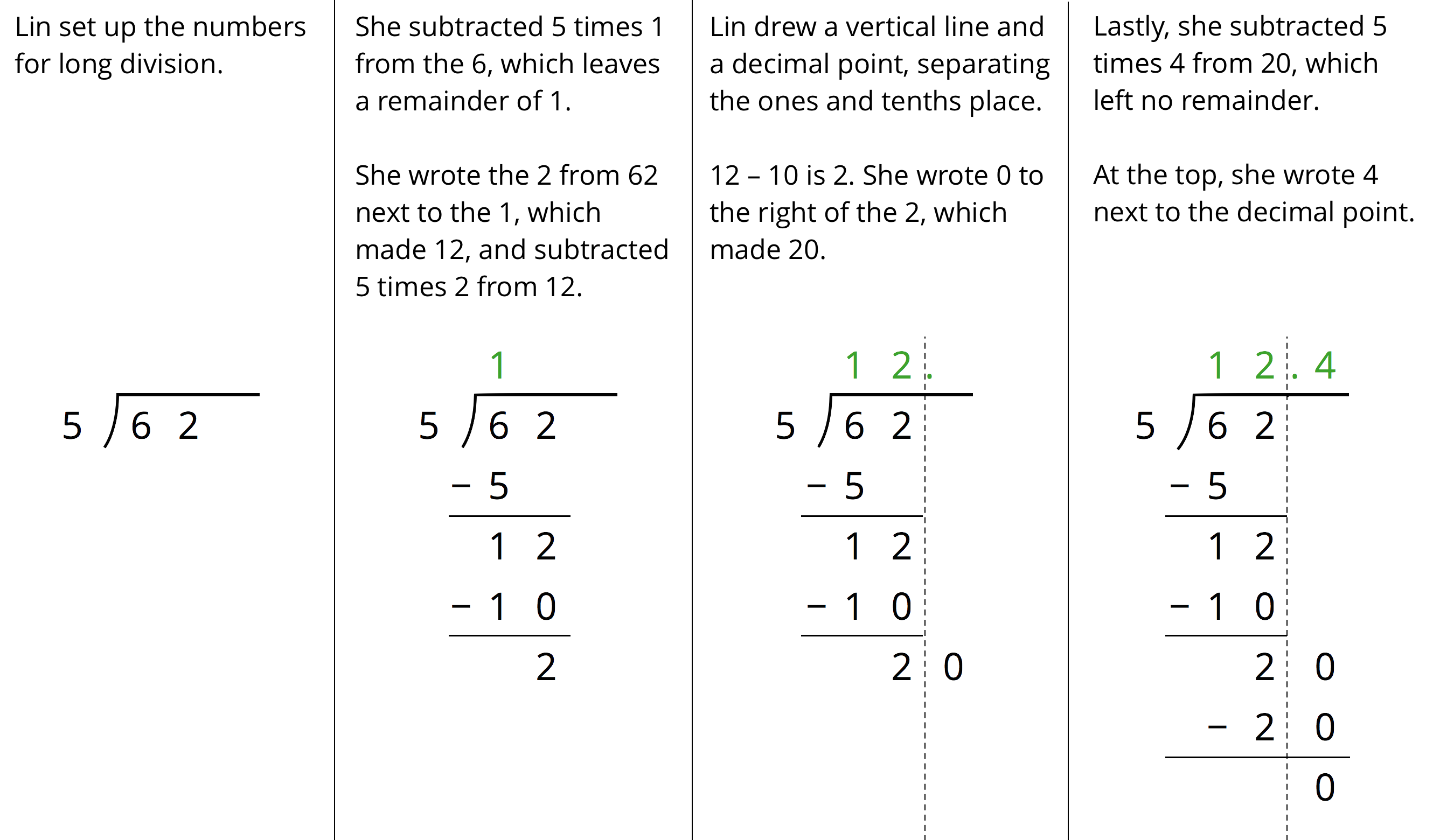
#### Activity Synthesis



### 3 Using Long Division to Calculate Quotients

#### Student Task Statement

Here is how Lin calculated .



1. Discuss with your partner:
   * Lin put a 0 after the remainder of 2. Why? Why does this 0 not change the value of the quotient?
   * Lin subtracted 5 groups of 4 from 20. What value does the 4 in the quotient represent?
   * What value did Lin find for ?
2. Use long division to find the value of each expression. Then pause so your teacher can review your work.
3. Use long division to show that:
   1. , or , is 1.25.
   2. , or , is 0.8.
   3. , or , is 0.125.
   4. , or , is 0.04.
4. Noah said we cannot use long division to calculate because there will always be a remainder.
   1. What do you think Noah meant by “there will always be a remainder”?
   2. Do you agree with him? Explain your reasoning.



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