



Roots of Reason

Division Strategies

$672 \div 5$ take out chunks of 5 you are sure about,
then add the chunks up. every page below is this one problem.

1 Think Multiplication

$$672 \div 5 = ?$$

is asking

$$5 \times ? = 672$$

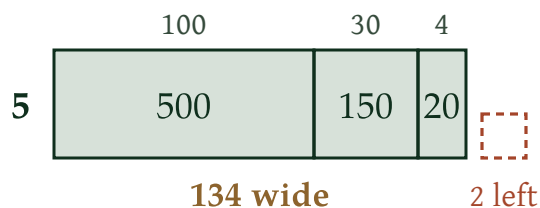
$$5 \times 100 = 500 \quad 5 \times 200 = 1000$$

not enough

too much

Every division has a matching multiplication.
Two multiplication facts you already know put
the answer between **100** and **200** before you
divide.

3 Draw It as a Rectangle



$$5 \times 134 = 670, \text{ and } 2 \text{ more makes } 672$$

The same problem as an area. The height is the
divisor, the widths are the chunks. The **leftover**
cannot fill a row.

2 Take Out Chunks You Know

$$672 \text{ take 100 fives} \quad -500$$

$$172 \text{ take 20 fives} \quad -100$$

$$72 \text{ take 10 fives} \quad -50$$

$$22 \text{ take 4 fives} \quad -20$$

2 nothing left to take

$$100 + 20 + 10 + 4 \quad \mathbf{134 \text{ R}2}$$

Subtract a chunk of fives you are sure of. **Bigger
chunks** take fewer steps and give the same
answer.

4 What the Remainder Means

672 pencils, 5 to a box.
How many boxes get filled? **134**

How many boxes to hold
every single pencil? **135**

How many pencils are
still loose at the end? **2**

The division is **134 R2** every time. The question
decides whether the 2 is dropped, adds a box, or
is the answer.