

Renaming 2- to 3-Digit Numbers in Division

I. Learning Objectives

- Cognitive:** Show the renaming 2- to 3- digit numbers help make computation easy in division
Psychomotor: Write the expanded form of numbers
Affective: Be industrious

II. Learning Content

- Skill:** Renaming 2- to 3-digit numbers make computation easy in division
References: BEC PELC I.E.1.1.1.1
Materials: cut-outs, flash cards, number cards, show me cards
Value: Industry

III. Learning Experiences

A. Preparatory Activities

1. Drill: Division Basic Facts

Contest - "Giant Steps"

- The teacher calls on 4 pupils at a time.
- She flashes the number cards and the pupils outdo each other by giving the correct answers.
- The first pupil to give the correct answer will take one step forward.
- The first pupil to reach the finish line wins the game.

$64 \div 8 = \square$	$72 \div 9 = \square$	$25 \div \square = 5$	$32 \div 4 = \square$	$48 \div \square = 6$	$30 \div 6 = \square$
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2. Review – Renaming Numbers

- The teacher flashes the number cards.
- The pupils write the expanded form of the number in their show me cards.

126	$100 + 20 + 6$	935	$900 + 30 + 5$
473	$400 + 70 + 3$	228	$200 + 20 + 8$
564	$500 + 60 + 4$		

3. Motivation

Introduce the song “I’m Mathematics” to the tune of “Skip to my Loo”

(I'm mathematics, how do you do?) 2x
Who are you, tell me true
I'm just a child, but I know you.

You know addition, yes I do

Multiplication, yes I do
Even division, yes I do
Let's get together, I like you

What are the operation mentioned in the song?

Addition, Multiplication and Division

Let's see if you can tell the operation that we shall use in solving the problem on the chart.

B. Development Activities

1. Presentation

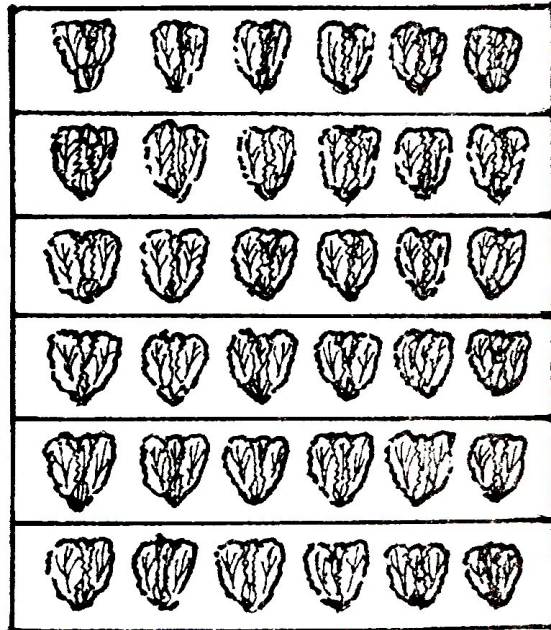
a. Present problem 1 (2 digit dividend)

Tony and Peter wanted to help their family in earning a living. They planted mustard seedlings in their garden plots. There are 36 seedlings. They planted 6 seedlings in each, how many rows of mustard seedlings did they have?

b. Analysis

- Who wanted to help their family in earning a living?
- What did they do to increase the family income?
- Do you also help your family in earning a living?
- What kind of children are Tony and Peter?
- Are they industrious?
- How many seedlings do they have?
- How many seedlings did they plant in each row?
- What shall we do to answer the problem?

- c. Solve the problem through illustration. Let us look at the seedlings on the chart.



How many seedlings are there in all?

How many rows are there?

How many seedlings are there in each row?

Write the division sentence

$$36 \div 6 = 6$$

$$\begin{array}{r} 6 \overline{)36} \\ \underline{36} \\ 0 \end{array}$$

- d. solve the problem by renaming the dividend (use of expanded form). Let's solve the problem with the use of the expanded form. Write the number sentence.

$$36 \div 6 = N$$

Rename 36 using the expanded form of the number.

$$30 + 6 = 36$$

$$30 \div 6 = 5$$

$$6 \div 6 = 1$$

$$5 + 1 = 6$$

$$6 \overline{)36}$$

e. Solve the problem using the short form.

$6 \overline{)36}$	<p>Step 1</p> <p>6 is not contained in 3. so, take 36 $36 \div 6 = 6$</p>	<p>Step 2</p> <p>Multiply 6 by 6. $6 \times 6 = 36$ subtract $36 - 36 = 0$</p>
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f. Present problem 2 (3 digits dividend).

There are 248 pupils in grade 3. They are distributed equally among 4 classes.
How many pupils are there in each class?

How many pupils are there?

Into how many classes are they distributed equally?

Write the number sentence. $248 \div 4 = N$

Rename the dividend and solve.

$4 \overline{)248}$	<p>—————▶ $200 + 40 + 8$ $200 \div 4 = 50$ $40 \div 4 = 10$ $8 \div 4 = 2$ $50 + 10 + 2 = 62$</p>
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Let's show it in another way.

$ \begin{array}{r} 50 + 10 + 2 \\ 4 \overline{)200 + 40 + 8} \\ \underline{200} \\ 0 \quad 40 \\ \quad \underline{40} \\ \quad \quad 0 \quad 8 \\ \quad \quad \quad \underline{8} \\ \quad \quad \quad \quad 0 \end{array} $	= 62
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Who can compute the answer using the short form?

$$4 \overline{)248} \quad \underline{62}$$

Step 1
Divide the hundreds.
4 is not contained in 2
So take 24, $24 \div 4 = 6$

<p>Step 2</p> <p>Multiply 4 by 6. $4 \times 6 = 24$ Subtract 24 from 24 $24 - 24 = 0$</p>	$ \begin{array}{r} \underline{6} \\ 4 \overline{)248} \\ \underline{24} \\ 0 \end{array} $
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Step 3	$\begin{array}{r} 62 \\ 4 \overline{)248} \\ \underline{24} \\ 08 \\ \underline{8} \\ 0 \end{array}$
Bring down 8.	
$8 \div 4 = 2$	
Multiply 4 by 6	
$2 \times 4 = 8$	
Subtract $8 - 8 = 0$	

Did we get the same answer when we divide 248 by 4 using the expanded notation and the short form?

Which method is easy to use?

Why?

2. Guided Practice

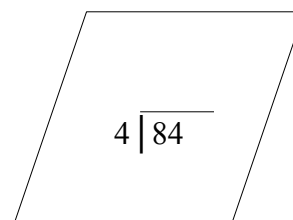
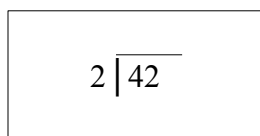
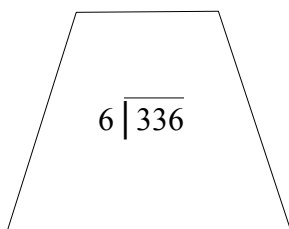
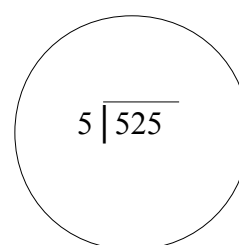
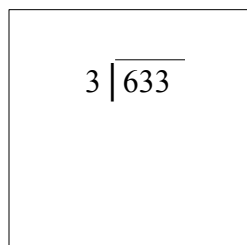
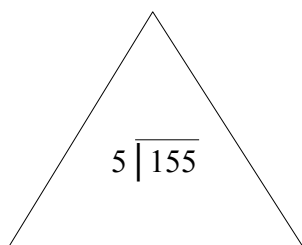
a. Work in pairs

Game “Compute Me”

Distribute number cards with division problem written on them. The pupils answer the problem by renaming the divided as a sum of hundreds, tens and ones. (expanded form)

Instruct them to write their answer at the back of the number card.

The first pair to give the correct answer wins the game.



$$3 \overline{)93}$$

$$3 \overline{)366}$$

b. Group the pupils into Learning Barkadas. (Lbs)

Game - "Come and Get Me?"

The teacher arranges number cards on the chalkboard.

Then she distribute activity cards to the Lbs.

The pupils will answer the problem in the activity card by renaming the dividend using the expanded form.

After answering the problem, they will look for the answer on the chalkboard.

The first LB to get the correct answer form the chalkboard wins.

3. Generalization

How so we make our computation in division easy?

We can make computation in division easy by remaining the dividend with the use of the expanded form.

What are the steps in division of numbers using the expanded form?

1. Rename the dividend using the expanded form.
2. Divide each number by the divisor.
3. Add the partial quotients.

C. Application

Write the missing numbers.

$$1) 2 \overline{)844} \longrightarrow \begin{array}{l} 800 + \underline{\quad\quad} + 4 \\ 800 \div \underline{\quad\quad} = \underline{\quad\quad} \\ 40 \div 2 = \underline{\quad\quad} \\ \underline{\quad\quad} \div 2 = \underline{\quad\quad} \end{array}$$

$$2) \overline{2 \mid 542} \longrightarrow 542$$

	÷	2	=		+	
	÷	2	=		+	
	÷	2	=		+	
	+		+		=	

B. Rename, then find the quotient.

1) $5 \overline{5 \mid 655}$

2) $4 \overline{4 \mid 88}$

$3 \overline{3 \mid 46}$