

Dividing 3- to 4-Digit Numbers by 1- to 2-Digit Numbers without Remainder

I. Learning Objectives

- Cognitive:** Divide 3- to 4-digit numbers without remainder
Psychomotor: Write division equation correctly.
Affective: Practice eating the right kind of foods.

II. Learning Content

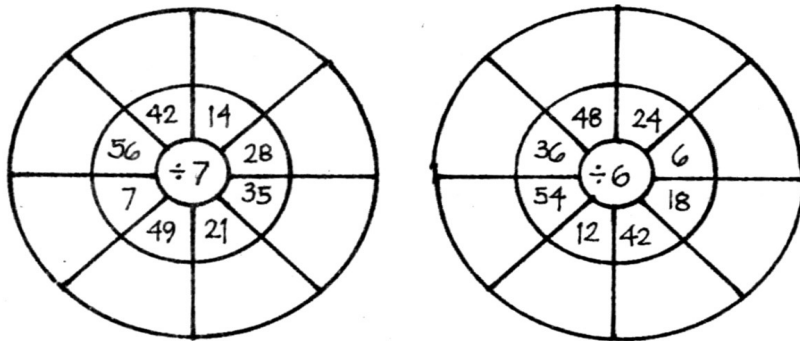
- Skills:** Dividing 3- to 4-digit numbers by 1- to 2- digit numbers without remainder. Writing division equation correctly.
Reference: BEC PELC I E 1.4.1
Materials: Show me board, wheel card, cut-outs of fruits/baskets
Value: Being healthy

III. Learning Experiences

A. Preparatory Activities

1. **Drill:** Basic Division Facts

Write the quotients in the outer circle.



2. **Review** – Dividing 2 to 3-digit numbers by 1-digit divisor

Divide the following numbers. Use “Show-Me-Board.”

- 1) 2) 3)
- 4) 5) 4)

3. Motivation

Present a problem opener.

Anne bought 120 mangoes in the market. She placed the mangoes equally in 3 baskets. How many mangoes were placed in each basket?

B. Development Activities

1. Presentation

- a. Ask:
 - Who bought mangoes?
 - How many mangoes did she buy?
 - Where did she place the mangoes?
 - Is it good to eat mangoes? Why?
- a. Solve the problem using the 4 steps in problem solving.
 - Understand the problem
 - Where did Anne buy mangoes?
 - How many mangoes did she buy?
 - How many baskets did she use?
 - How many mangoes were placed in each basket?
 - What process are we going to use?
 - Make a plan
 - What operation will solve the problem?
 - Carry out the plan
 - Ask a pupil to write the number sentence: $120 \div 2 = N$

Activity 1

- 1) Divide the the class into 4 teams.
- 2) Each team will show the solution by using paper cut outs of mangoes and baskets.

Answer: Each basket will have 60 mangoes. Did each team get the correct. Answer? Prove your answer.

Activity 2

Solve the problem in another way using expanded notation:

How many hundreds are there in 120?

How many tens are there?

How many ones are there?

$$120 \div 2 = \begin{array}{r} 50 + 10 + 0 \\ 2 \overline{)100 + 20 + 0} \end{array} \quad \boxed{= 60 \text{ mangoes}}$$

- Look back:
 - Is the answer correct?
 - What should be the correct label?

Let us try to solve the problem using another way.

<p>Step 1</p> $\begin{array}{r} 6 \\ 2 \overline{)120} \\ \underline{12} \\ 0 \end{array}$	<p>Divide the tens. $12 \text{ tens} \div 2 = 6 \text{ tens}$ Write 6 in the tens place</p> <p>Multiply $6 \times 2 = 12$ Write 12 under 12. Subtract $12 - 12$. Bring down 0.</p>
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<p>Step 2</p> $\begin{array}{r} 6 \\ 2 \overline{)120} \\ \underline{12} \\ 0 \\ \underline{0} \\ 0 \\ \underline{0} \\ x \end{array}$	<p>Divide the ones. $0 \text{ ones} \div 2 = 0 \text{ ones}$ Write 0 in the ones place.</p> <p>Multiply: $0 \times 2 = 0$ Write 0 under 0. Subtract $0 - 0$.</p>
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Answer: 60 mangoes were placed in each basket.

To check:

Multiply

60	\Rightarrow	quotient
$\times 2$	\Rightarrow	divisor
$\underline{120}$	\Rightarrow	dividend

b. Give more examples.

$$\begin{array}{r} 171 \\ 2 \overline{)342} \\ \underline{2} \\ 14 \\ \underline{14} \\ 2 \\ \underline{2} \\ 0 \end{array}$$

$$\begin{array}{r} 46 \\ 12 \overline{)552} \\ \underline{48} \\ 72 \\ \underline{72} \\ 0 \end{array}$$

$$\begin{array}{r} 1609 \\ 6 \overline{)9654} \\ \underline{6} \\ 36 \\ \underline{36} \\ 5 \\ \underline{0} \\ 54 \\ \underline{54} \\ 0 \end{array}$$

$$\begin{array}{r} 352 \\ 21 \overline{)7392} \\ \underline{63} \\ 109 \\ \underline{105} \\ 42 \\ \underline{42} \\ 0 \end{array}$$

2. Guided Practice

a. Work in groups of four.

Divide: Fill in the blank with the correct number. Do this on your paper.

$$\begin{array}{r} 1) \quad 4 \overline{)664} \\ \quad \underline{-4} \quad (4 \times 1) \\ \quad \quad \underline{-} \quad (4 \times 6) \\ \quad \quad \quad \underline{-} \quad (4 \times 6) \\ \quad \quad \quad \quad \underline{} \end{array}$$

$$\begin{array}{r} 2) \quad 15 \overline{)375} \\ \quad \underline{-30} \quad (15 \times 2) \\ \quad \quad \underline{-} \quad (15 \times 2) \end{array}$$

$$\begin{array}{r} 3) \quad 3 \overline{)5868} \\ \quad \underline{-3} \quad (3 \times 1) \\ \quad \quad \underline{-} \quad (3 \times 9) \\ \quad \quad \quad \underline{-} \quad (3 \times 5) \\ \quad \quad \quad \quad \underline{-} \quad (3 \times 6) \end{array}$$

$$\begin{array}{r} 4) \quad 32 \overline{)9984} \\ \quad \underline{-96} \quad (32 \times 3) \\ \quad \quad \underline{-} \quad (32 \times 1) \\ \quad \quad \quad \underline{-} \quad (32 \times 2) \\ \quad \quad \quad \quad \underline{-} \quad (32 \times 2) \end{array}$$

- Work in pairs: (Dyads)

Solve the number problem in each box. Then find the answer written in the cut outs of apples. Place the apples in their correct box.

1) $386 \div 2$


2) $195 \div 13$

3) $4788 \div 7$

4) $9425 \div 25$

5) $636 \div 12$

a.  684

b.  15

c.  377

d.  193

e.  53

3. Generalization

What should you remember in dividing 3- to 4-digit numbers by 1- to 2- digit divisor?

➡ To divide 3- to 4-digit numbers by 1- to 2-digit divisor:

Step 1:

- Take the first number at the left of the dividend. If the first digit of the dividend is less than the divisor, take the first two digits.

Step 2:

- Divide, multiply, subtract and bring down.
- Repeat the same procedure up to the last digit in the dividend.

➡ To check the answer:

- Multiply the quotient by the divisor
- The answer is correct if the product is equal to the dividend.

C. Application

1. Analyze the table below. Divide the given numbers to find the number of trays to be used if each tray holds 12 eggs. Then complete the table with the correct answers.

360 eggs	
432 eggs	
1 524 eggs	
1 008 eggs	
8 940 eggs	

IV. Evaluation

- A. Divide each number problems. Check if the quotient is correct. Write True if it is correct and False if it is not.

- _____ 1) $596 \div 4 = 149$
_____ 2) $975 \div 15 = 95$
_____ 3) $1\,234 \div 2 = 617$
_____ 4) $5\,682 \div 21 = 362$
_____ 5) $4\,806 \div 54 = 89$

B. Solve each problem.

1. Alyssa has a vegetable garden in their farm. If she planted 819 okra seeds in 9 rows.
How many seeds were in each row?

Answer: _____

2. Father gathered 1 500 guavas. He placed them equally in 12 baskets. How many guavas
were there in each basket?

Answer: _____

V. Evaluation

A. Complete the division problem by putting the correct number in each circle.

$$\begin{array}{r} 1. \quad 2 \overline{)432} \\ \underline{-0} \\ 3 \\ \underline{-0} \\ 12 \\ \underline{12} \\ x \end{array}$$

$$\begin{array}{r} 2. \quad 27 \overline{)1134} \\ \underline{-000} \\ 54 \\ \underline{-54} \\ x \end{array}$$

$$\begin{array}{r} 3) \quad 4 \overline{)6352} \\ \underline{-0} \\ 23 \\ \underline{-00} \\ 35 \\ \underline{-00} \\ 32 \\ \underline{-32} \\ x \end{array}$$

B. Divide and check:

1) $5 \overline{)535}$

2) $21 \overline{)630}$

3) $52 \overline{)7904}$

4) $78 \overline{)7644}$