



Division with Regrouping

Understanding Long Division (With Regrouping)

- Sometimes, the number at a place value is not enough to divide by the divisor.
- In such cases, we regroup the digits to make a bigger number.
- Regrouping means combining digits to divide properly.
- This method still follows the same steps:
 - Divide
 - Multiply
 - Subtract
 - Bring down
 - Regroup if needed

Examples with Solutions

Example 1

➤ **Divide $72 \div 4$**

- ✓ Step 1: $7 \div 4 = 1$
- ✓ Step 2: $1 \times 4 = 4 \rightarrow$ Subtract: $7 - 4 = 3$
- ✓ Step 3: Bring down 2 \rightarrow becomes 32
- ✓ Step 4: $32 \div 4 = 8$

Final Answer: 18

Example 2

➤ **Divide $96 \div 6$**

- ✓ Step 1: $9 \div 6 = 1$
- ✓ Step 2: $1 \times 6 = 6 \rightarrow$ Subtract: $9 - 6 = 3$
- ✓ Step 3: Bring down 6 \rightarrow becomes 36
- ✓ Step 4: $36 \div 6 = 6$

Final Answer: 16

Example 3

➤ **Question: Divide $81 \div 3$**

- ✓ Step 1: $8 \div 3 = 2$
- ✓ Step 2: $2 \times 3 = 6 \rightarrow$ Subtract: $8 - 6 = 2$
- ✓ Step 3: Bring down 1 \rightarrow becomes 21
- ✓ Step 4: $21 \div 3 = 7$

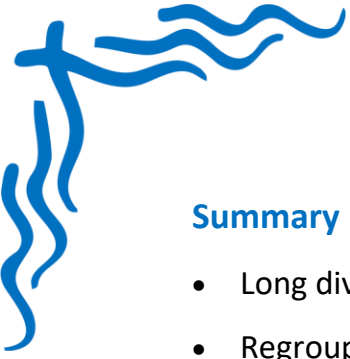
Final Answer: 27

Example 4

➤ **Divide $64 \div 5$**

- ✓ Step 1: $6 \div 5 = 1$
- ✓ Step 2: $1 \times 5 = 5 \rightarrow$ Subtract: $6 - 5 = 1$
- ✓ Step 3: Bring down 4 \rightarrow becomes 14
- ✓ Step 4: $14 \div 5 = 2$, remainder 4

Final Answer: 12 remainder 4



Summary Points

- Long division with regrouping is used when the digit is too small to divide.
- Regroup by bringing the next digit down to form a bigger number.
- **Follow the steps:** Divide → Multiply → Subtract → Bring down
- Use regrouping when needed to make division possible.
- Check your answer using multiplication and adding the remainder (if any).