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 ÷ 4**

✓ Step 1: 7 ÷ 4 = 1

✓ Step 2: 1 × 4 = 4 → Subtract: 7 – 4 = 3

✓ Step 3: Bring down 2 → becomes 32

✓ Step 4: 32 ÷ 4 = 8

Final Answer: 18

Example 2

➢ **Divide 96 ÷ 6**

✓ Step 1: 9 ÷ 6 = 1

✓ Step 2: 1 × 6 = 6 → Subtract: 9 – 6 = 3

✓ Step 3: Bring down 6 → becomes 36

✓ Step 4: 36 ÷ 6 = 6

Final Answer: 16

Example 3

➢ **Question: Divide 81 ÷ 3**

✓ Step 1: 8 ÷ 3 = 2

✓ Step 2: 2 × 3 = 6 → Subtract: 8 – 6 = 2

✓ Step 3: Bring down 1 → becomes 21

✓ Step 4: 21 ÷ 3 = 7

Final Answer: 27

Example 4

➢ **Divide 64 ÷ 5**

✓ Step 1: 6 ÷ 5 = 1

✓ Step 2: 1 × 5 = 5 → Subtract: 6 – 5 = 1

✓ Step 3: Bring down 4 → becomes 14

✓ Step 4: 14 ÷ 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).