

Date: _____

Chapter 12, Lesson C: Divide 2-Digit Numbers by 2, 3, 4 and 5 (12.C.1)

- **Division** is dividing a number into equal parts or sharing it equally.
- A division number sentence consists of:

dividend $\div$ **divisor** = **quotient**

$$24 \quad \div \quad 3 \quad = \quad 8$$

dividend $\div$ **divisor** = **quotient and remainder**

$$25 \quad \div \quad 3 \quad = \quad 8 \quad R \quad 1$$

- If the dividend is a **multiple** of the divisor, there will be no remainder.

$$16 \div 2 = \underline{\quad}$$

$$21 \div 3 = \underline{\quad}$$

$$56 \div 8 = \underline{\quad}$$

- If the dividend is **not a multiple** of the divisor, there will be a remainder.
We count back till we reach the closest multiple.

remainder = dividend - closest smaller multiple of the divisor

The remainder is always **less** than the divisor.

remainder < divisor

$17 \div 2 = \underline{8 R 1}$

$16 \quad 1 \quad 1 < 2 \text{ so } R = 1$

$16 \div 2 = 8$

$23 \div 3 = \underline{\quad R \quad}$

$\quad \quad \quad < 3 \text{ so } R = \underline{\quad}$

- If the dividend is **greater than the tenth multiple** of the divisor, we break down the number into two multiples of the divisor.

$$\begin{array}{c}
 (48) \div 4 = 12 \\
 \swarrow \quad \searrow \\
 (40) \quad (8) \\
 40 \div 4 = 10 \\
 8 \div 4 = 2 \\
 10 + 2 = 12
 \end{array}$$

- We can solve the following using different number bonds.

$$\begin{array}{c}
 (85) \div 5 = \underline{\hspace{2cm}} \\
 \swarrow \quad \searrow \\
 (50) \quad (\quad)
 \end{array}$$

$$\begin{array}{l}
 50 \div 5 = 10 \\
 \underline{\hspace{1cm}} \div 5 = \underline{\hspace{1cm}} \\
 10 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}
 \end{array}$$

$$\begin{array}{c}
 (85) \div 5 = \underline{\hspace{2cm}} \\
 \swarrow \quad \searrow \\
 (40) \quad (\quad)
 \end{array}$$

$$\begin{array}{l}
 40 \div 5 = \underline{\hspace{2cm}} \\
 \underline{\hspace{2cm}} \\
 \underline{\hspace{2cm}}
 \end{array}$$

$$\begin{array}{c}
 (85) \div 5 = \underline{\hspace{2cm}} \\
 \swarrow \quad \searrow \\
 (\quad) \quad (\quad)
 \end{array}$$

$$\begin{array}{l}
 \underline{\hspace{2cm}} \\
 \underline{\hspace{2cm}} \\
 \underline{\hspace{2cm}}
 \end{array}$$

- If the dividend is not a multiple of the divisor and greater than the 10th or 11th multiple of the divisor, we count back till we reach the closest multiple.

$$\begin{array}{c}
 (23) \div 2 = 11 \text{ R } 1 \\
 \swarrow \quad \searrow \\
 (22) \quad (1) \quad 1 < 2 \text{ so R } = 1 \\
 22 \div 2 = 11
 \end{array}$$

$$\begin{array}{c}
 (54) \div 5 = \underline{\hspace{2cm}} \\
 \swarrow \quad \searrow \\
 (50) \quad (4) \quad 4 < 5 \text{ so R } = \underline{\hspace{1cm}} \\
 \underline{\hspace{2cm}}
 \end{array}$$

23 is an odd number so it is not a multiple of 2.
Multiples of 2 are all even numbers.

We go back to the 2 times table.

$$10 \times 2 = 20$$

$$11 \times 2 = 22$$

$12 \times 2 = 24$ → 23 is between 22 and 24.
We choose the smaller multiple which is 22: $11 \times 2 = 22$
The difference between 23 and 22 is 1. So the remainder is 1.

54 is not a multiple of 5. Multiples of 5 have 0 or 5 in the ones place. We go back to 5 times table.

$$10 \times 5 = 50$$

$11 \times 5 = 55$ → 54 is between 50 and 55.
We choose the smaller multiple which is 50: $10 \times 5 = 50$
The difference between 54 and 50 is 4. So the remainder is 4.

More examples:

$\begin{array}{c} (29) \\ \swarrow \quad \searrow \\ (27) \quad (2) \end{array}$
 $\div 3 = \underline{\hspace{2cm}}$
 $2 < 3$ so R = $\underline{\hspace{2cm}}$
 $27 \div 3 = \underline{\hspace{2cm}}$

$\begin{array}{c} (33) \\ \swarrow \quad \searrow \\ \quad \quad \quad \end{array}$
 $\div 4 = \underline{\hspace{2cm}}$
 $\underline{\hspace{2cm}}$

29 is not a multiple of 3. We go back to 3 times table.

$$8 \times 3 = 24$$

$$9 \times 3 = 27$$

$10 \times 3 = 30$ → 29 is between 27 and 30.
We choose the smaller multiple which is 27:
 $9 \times 3 = 27$
The difference between 29 and 27 is 2. So the remainder is 2.

33 is an odd number so it is not a multiple of 4.
Multiples of 4 are all even numbers.
We go back to the 4 times table.

$$8 \times 4 = 32$$

$9 \times 4 = 36$ → 33 is between 32 and 36.
We choose the smaller multiple which is 32: $8 \times 4 = 32$
The difference between 33 and 32 is 1. So the remainder is 1.