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	÷	divisor	=	quotient
24	÷	3	=	8

dividend	÷	divisor	=	quotient	and remainder
25	÷	3	=	8	R 1

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

$$16 \div 2 = \underline{8} \qquad 21 \div 3 = \underline{7} \qquad 56 \div 8 = \underline{7}$$

- 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   1   1 < 2 so R = 1

  $16 \div 2 = 8$

  $23 \div 3 = \underline{7}\ R\ \underline{2}$

  21   2 $\underline{2}$ < 3 so R = $\underline{2}$

  $\underline{21 \div 3} = 7$

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

$(48) \div 4 = 12$

(40) (8)

$40 \div 4 = 10$
$8 \div 4 = 2$

$10 + 2 = 12$

- We can solve the following using different number bonds.

$(85) \div 5 = \underline{17}$ $(85) \div 5 = \underline{17}$ $(85) \div 5 = \underline{17}$

(50) **(35)**   (40) **(45)**   **(55) (30)**

$50 \div 5 = 10$ $40 \div 5 = \underline{8}$ $55 \div 5 = 11$
$35 \div 5 = \underline{7}$ $45 \div 5 = 9$ $30 \div 5 = 6$
$10 + \underline{7} = 17$ $8 + 9 = 17$ $11 + 6 = 17$

- 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.

$(23) \div 2 = 11 \ R \ 1$

(22) (1) $1 < 2$ so $R = 1$

$22 \div 2 = 11$

$(54) \div 5 = \underline{10 \ R4}$

(50) (4) $4 < 5$ so $R = \underline{4}$

$50 \div 5 = 10$

40

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:

(29) ÷ 3 = __9 R2__

(27) (2)   2 < 3 so R = __2__

27 ÷ 3 = __9__

(33) ÷ 4 = __8 R1__

(32) (1) 1 < 4 so R=1

32 ÷ 4 = 8

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.