



## Department of Education, Sabaragamuwa Province – Weekly School

Grade: 6

Subject: - Mathematics

Week : 11

### Unit : - Factors and Multiples

#### Number of Periods : - 09

- Clearly understand the pages 140 and 141 in the text book. Observe the 6 chairs arranged in columns and rows.

According to that, know that 6 can be written as the product of two numbers as shown below.

$$6 = 1 \times 6$$

$$6 = 2 \times 3$$

$$6 = 3 \times 2$$

$$6 = 6 \times 1$$

- Observe the page number 141. 12 can be written as the product of two numbers as shown below when the 12 chairs shown there are arranged as above.

$$12 = 1 \times 12$$

$$12 = 2 \times 6$$

$$12 = 3 \times 4$$

$$12 = 4 \times 3$$

$$12 = 6 \times 2$$

$$12 = 12 \times 1$$

- Like this, write the numbers below in ways those can be written as the product of two numbers.

1) 18

2) 24

3) 30

4) 40

**When a whole number is written as a product of two whole numbers, those two numbers are known as factors of the original number.**

While writing the factors of 16, only the numbers below 16 are sufficient.

**All products**

$$16 = 1 \times 16$$

$$16 = 2 \times 8$$

$$16 = 4 \times 4$$

$$16 = 8 \times 2$$

$$16 = 16 \times 1$$

So, the factors of 16 are 1, 2, 4, 8, 16

**Sufficient products**

$$16 = 1 \times 16$$

$$16 = 2 \times 8$$

$$16 = 4 \times 4$$

- The factors of 20 are

$$20 = 1 \times 20$$

$$20 = 2 \times 10$$

$$20 = 4 \times 5$$

So, the factors of 20 are 1, 2, 4, 5, 10, 20

<b>0 is not considered as a factor of a whole number.</b>
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Complete the exercise 11.1 in the page number 142 of the text book. Obtain the help from the mathematics teacher to clear the doubts.

- Thoroughly understand the page number 143. Thoroughly understand the multiplication table given.
- Find the factors of a number by writing it as the product of two numbers.

Find the factors of the following numbers using the multiplication table.

1) 14

2) 20

3) 30

4) 32

Complete the exercise 11.2 in the page number 144 of the text book. Try to solve the doubts you get.

### **Finding factors using division**

Clearly read page numbers 144 and 145. Observe the instances where a number is being divided by another number without a remainder.

Ex :-

$$16 \div 8$$

$$\begin{array}{r} 2 \\ 8 \overline{) 16} \\ \underline{16} \\ 0 \end{array}$$

$$15 \div 8$$

$$\begin{array}{r} 1 \\ 8 \overline{) 15} \\ \underline{8} \\ 7 \end{array}$$

$$16 \div 8 = 2 \text{ with a remainder of } 0$$

$$15 \div 8 = 1 \text{ with a remainder of } 7$$

**If a certain number can be divided by another whole number such that there is no remainder, then the second number is called as the factor of the first**

- 16 can be divided by 8 without a remainder, so 8 is a factor of 16.
- There is remainder while dividing 15 by 8, so 8 is not a factor of 15.

Complete the exercise 11.3 in the page number 146 of the text book. Try to solve the doubts you get.

Clearly understand the page 146. Correctly understand what a multiple of a number is.

**A multiple can be obtained by multiplying a whole number by another whole number.**

Ex :-

$$3 \times 1 = 3$$

$$3 \times 2 = 6$$

$$3 \times 3 = 9$$

$$3 \times 4 = 12$$

So, the multiples of 3 are 3, 6, 9, 12, 15, .....

- Write the first five multiples of the following numbers.

1) 5

2) 7

3) 10

4) 12

5) 15

- Complete the activity 1 in the page number 148 of the text book.
- Correctly complete the exercise 11.4 in the page 148 and 149 of the text book.

- Correctly understand the example 1 in the page 149.

Correctly complete the exercise 11.5 in the page 150 of the text book.

Clearly understand the pages 151 and 152, to know whether a number is divisible by 2, by 5 and by 10.

**If the digit in ones place of a number is divisible by 2 then that number is divisible by 2 without a remainder.**

Ex :-

$$\begin{array}{r} 348 \\ 2 \overline{) 8} \\ \underline{8} \\ 0 \end{array}$$

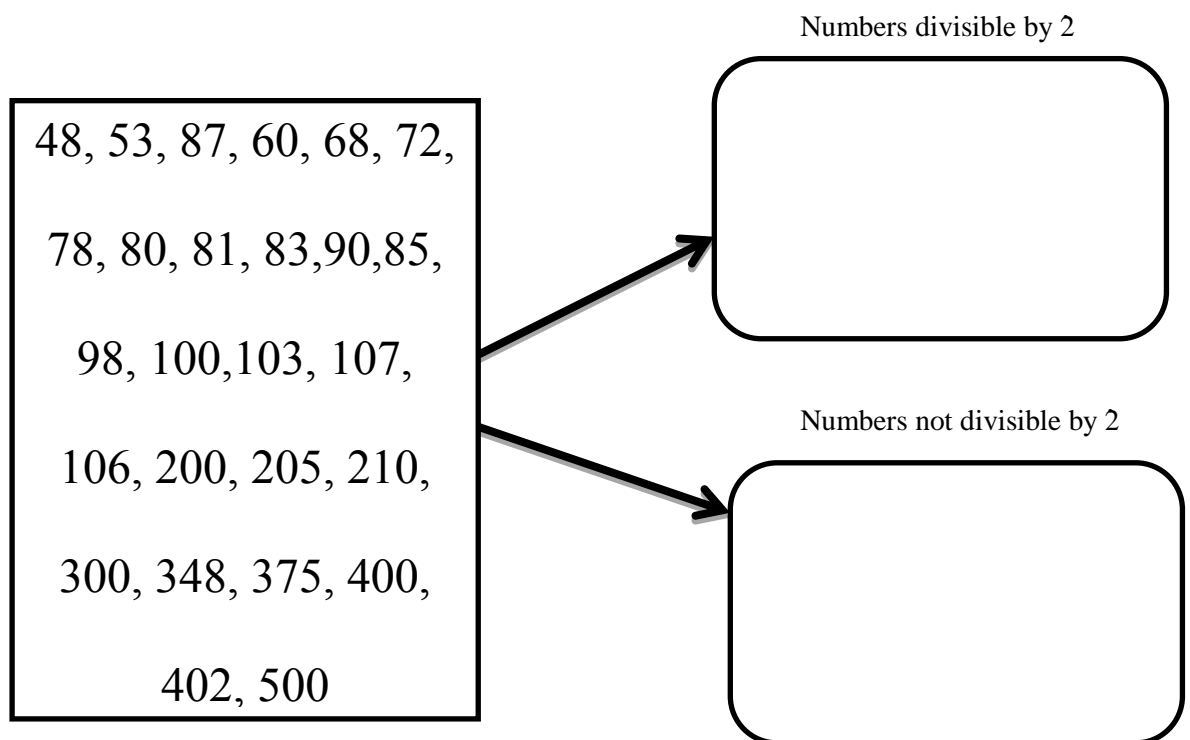
8 is dividable by 2. So the number 348 is divisible by 2 .

347

$$\begin{array}{r} 347 \\ 2 \overline{) 7} \\ \underline{6} \\ 1 \end{array}$$

7 is not divisible by 2. So, the number 347 is not divisible by 2.

- ❖ Identify the numbers below as divisible by 2 or not divisible by 2 according to the digit in the ones place and write them in the relevant boxes.



**If the digit in the ones place of a number is 0 or 5, then that number is divisible by 5.**

Ex :-

$$\begin{array}{r} 15 \\ 5 \overline{) 75} \\ \underline{5} \phantom{0} \\ 25 \\ \underline{25} \\ 0 \end{array}$$

$$\begin{array}{r} 16 \\ 5 \overline{) 80} \\ \underline{5} \phantom{0} \\ 30 \\ \underline{30} \\ 0 \end{array}$$

75 is divisible by 5 without a remainder.

80 is divisible by 5 without a remainder.

❖ Write whether the following numbers are divisible by 5 by considering the digit in the ones place.

1) 120

2) 105

3) 252

4) 343

**If the digit in the ones place of a number is 0, then that number is divisible by 10.**

$$\begin{array}{r} 10 \\ 10 \overline{) 100} \\ \underline{10} \phantom{0} \\ 00 \\ \underline{00} \\ 0 \end{array}$$

$$\begin{array}{r} 34 \\ 10 \overline{) 340} \\ \underline{30} \phantom{0} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

100 is divisible by 10 without a remainder.

340 is divisible by 10 without a remainder.

$$\begin{array}{r} 12 \\ 10 \overline{) 125} \\ \underline{10} \phantom{0} \\ 25 \\ \underline{20} \\ 5 \end{array}$$

125 is not divisible by 10 without a remainder.

Select and write the numbers that are divisible by 10 from the following numbers.

50, 65, 80, 87, 100, 90, 105, 110, 150, 99, 145, 120, 130, 200, 208

Correctly complete the exercise 11.6 in the page 152 of the text book.

Clearly understand the pages 153 and 154 of the text book.

Complete the miscellaneous exercise in page number 154 and 155 as an additional practice.

- Clearly understand the summary in page 155 of the text book.