

## Vision Empower & XRCVC

Teacher Instruction KIT

# Division

Syllabus: Karnataka State Board

Subject: Math

Grade: 5

Textbook Name: Karnataka State Board

Chapter Number & Name: 12. Division

## 1. OBJECTIVE AND OVERVIEW

### Objective

- Divide the numbers by standard division algorithm method,
- Divide a 5-digit number by another 1 or 2-digit number by using standard division algorithm method
- Solve verbal problems based on division of numbers.

### Prerequisite Concept

- Division

*TIK\_MATH\_G4\_CH6\_Division*

### Content Index

*Kindly Note: Activities marked with \* are mandatory*

#### 1. OBJECTIVE AND OVERVIEW

#### 2. LEARN

##### 2.1 KEY POINTS

##### 2.2 LEARN MORE

#### 3. ENGAGE

##### 3.1 INTEREST GENERATION ACTIVITY

Activity 1: Solve the riddles

##### 3.2 CONCEPT INTRODUCTION ACTIVITIES

#### DIVISION

Activity 2: The Concept of division

Activity 3: The standard division algorithm

##### 3.3 LET'S DISCUSS: RELATE TO DAILY LIFE\*

#### 4. EXERCISES & REINFORCEMENT

##### 4.1 PRACTICE EXERCISES

Activity 4: Homework problems

##### 4.2 IMPORTANT GUIDELINES\*

Exercise Reading

Perform Textbook Activity

Provide Homework

name : Division

run : 2019

org : VisionEmpower

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## 2. LEARN

### 2.1 KEY POINTS

Division: The process of classifying or distributing things equally is called division.

Dividend: The number which is to be divided is called the dividend.

Divisor: The number by which the dividend is divided is called the divisor

Quotient: The result of the division is called the quotient.

Remainder: What remains after the division is called the remainder. The remainder is always less than the divisor.

### 2.2 LEARN MORE

## 3. ENGAGE

### 3.1 INTEREST GENERATION ACTIVITY

#### Activity 1: Solve the riddles

*Materials required: None*

*Prerequisites: Multiplication, Division*

#### Activity Flow

1. *I am a 2 digit number, I am divisible by four, I am three kid's toes plus two kid's noses. Who am I?*  
*Answer: 32*
2. *I am divisible by 3, I am an even number, I am the missing number in  $48 / x = 8$ . Who am I?*  
*Answer: 6*

3. *I am a 2 digit number, I am divisible by 12, and I am more than 2 dozens and less than 4 dozens. Who am I?*

*Answer: 36*

4. *I am a single digit odd number, I am divisible by 3, I am a factor of 18. Who am I?*

*Answer: 9*

### 3.2 CONCEPT INTRODUCTION ACTIVITIES

#### **DIVISION**

##### **Activity 2: The Concept of division**

*Materials required: A copy (in audio or text format) of the children's book THE DOORBELL RANG by Pat Hutchins. A text copy of the story is attached to the end of this document. An audio version can be found at <https://www.youtube.com/watch?v=HZpXuc735pg>*

*Prerequisites: Division*

##### *Activity Flow*

- 1. This is a recap activity to make sure children recall what they have learnt in previous classes about division.*
- 2. The Doorbell Rang is a children's story. In the story, the children's mother has made cookies for them. Before they could eat them, however, the doorbell rings. Each ring of the doorbell brings more friends to share the delicious cookies Ma has made.*
- 3. Play the audio or read out the story to the children.*
- 4. Pause when Sam says: "That's 6 each" and ask the children how many cookies there are in total. How many children are there to share the cookies now?*
- 5. Pause each time the door is opened and more children come in. Ask the children to count how many children are there to share the cookies each time.*
- 6. How many will each child get?*
- 7. Each time you pause the story to ask these questions, make sure every child understands what is being done.*
- 8. After the story, explain that each time more children came in, the number of cookies each child got was smaller and smaller.*
- 9. Now explain what division is. Tell them that each time they calculated how to divide the cookies, they were actually dividing.*

##### **Activity 3: The standard division algorithm**

*Materials required: Ice cream sticks or toothpicks, rubber bands, paper cups*

*Prerequisites: Division*

### *Activity Flow*

- 1. Divide the children into groups of around 3 children each.*
- 2. Distribute a pack of 20 ice cream sticks and a few rubber bands to each group.*
- 3. First, ask the children to count their ice cream sticks.*
- 4. Now, tell the children to use the ice cream sticks to make groups such that there are 5 sticks in each group. The children can use the rubber bands to group the sticks together.*
- 5. How many groups are there now?*
- 6. Explain to the children that by grouping sticks and creating smaller groups from a larger one, they were actually dividing.*
- 7. Ask them if they remember what dividend, divisor, quotient and remainder are.*
- 8. In the problem they just did with sticks, which numbers form the dividend, divisor, quotient and remainder?*
  - *Dividend: 20*
  - *Divisor: 5*
  - *Quotient: 4*
  - *Remainder: 0*
- 9. To better explain problems with remainders, ask the children to divide the 20 sticks they have into groups of 3 each. Now, what will be the dividend, divisor, quotient and remainder?*
  - *Dividend: 20*
  - *Divisor: 3*
  - *Quotient: 6*
  - *Remainder: 2*
- 10. Now that the children have learnt the concepts involved in the standard division algorithm, teach them how to set out their problem on a Taylor frame. Where the dividend, divisor, quotient and remainder should go must be explained spatially to the children.*

### **3.3 LET'S DISCUSS: RELATE TO DAILY LIFE\***

- Dividing money
- Dividing objects/items
- Dividing land
- Dividing time for works (scheduling)
- Dividing while measuring the cloth
- Dividing works

## 4. EXERCISES & REINFORCEMENT

### 4.1 PRACTICE EXERCISES

#### Activity 4: Homework problems

*Materials required:* None

*Prerequisites:* Division

#### Activity Flow

##### I. Find the quotient and the remainder

- 1)  $48 / 6$
- 2)  $36 / 3$
- 3)  $55 / 4$
- 4)  $72 / 7$
- 5)  $232 / 4$
- 6)  $474 / 6$
- 7)  $255 / 4$
- 8)  $527 / 12$
- 9) *An orange garden has 82 orange plants. A farmer plucks 60 oranges from each plant and packs 12 oranges in each box. Calculate the number of boxes required to pack all oranges.*
- 10) *15 school children hire a cab for a day's excursion at rupees 9 per km. If they travel a distance of 325 km, find the amount to be shared by each one of them.*
- 11) *Anita has a cow which yields 8 litres of milk in a day. The selling price of one litre of milk is rupees 18. She wants to divide the amount earned in one month (30 days) among her 4 sons. What amount does each one get ?*

### 4.2 IMPORTANT GUIDELINES\*

#### Exercise Reading

It is very important that the children practice their learnings as well as their reading. Hence have the children read out the newly learned concepts from their textbooks or other available resources.

#### Perform Textbook Activity

It is good practice to have the children perform the textbook activities. Your textbook activities might not be accessible hence go through this resource to learn how to make textbook content accessible

#### Provide Homework

To evaluate their understanding and to help the student revise and implement the new learnt concept ensure to provide them with homework. Students should perform one or two of the questions mentioned above or from the textbook exercises with the teacher in

Class and the remaining may be given for homework. Also, ensure that the student knows their special skills linked to independently using their accessible books as it will be critical to doing homework independently

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