

IMPROVING TEACHER QUALITY PROGRAM
Mathematics Within: Algebraic Processes and Its Connections to Geometry

Participant Name: Ra Kour

Broad Topic: Dividing

Subtopic: Patterns, relationship

Grade level: Grade 5

Time: 30-minutes

Aim: Students will explore the inverse proportional relationship and direct proportional relationship.

Specific Objective(s):

- Students will be able to complete division chart showing the inverse relationship and direct relationship

Materials/Supplies:

- Big chart papers
- Calculator
- Math notebook

References: (text/handouts, etc)

- *Everyday Math* text

Lesson:

- **Introduction**
 - Show students that division problems can be written in three different ways or more.
 - Pass out to students Chart #1 and #2 and a calculator (see charts, p. 2).
- **Body** (note: students are in groups of 4 or 6)
 - For about five minutes let students complete the chart alone and silently.
 - Partner talk – students have five-minute talks with partners on how to figure out the problem (completing the chart).
 - Table talk – complete chart #1 and #2 together.
 - Post – large chart #1 and #2 on the board for all to see. Ask students to take out their notebook and write down what they have noticed about these two charts. Describe what they notice about these two charts.
 - Representatives from each group talk about their thinking on the chart. What do they notice?
- **Close**
 - Teacher explains her thinking and teaching of what inverse/direct relationship would look like.
 - Wrap it with any questions students might have.
- **Application/assessment**
 - Pose questions to students of what might they see in the real world that has an inverse relationship (as one thing gets bigger the other thing gets smaller).
 - Let students write in their notebook what they have noticed and learned about inverse/direct relationships.

Chart #1

Dividend <i>a</i>	Divisor <i>b</i>	<i>a/b</i>	Quotient calculation	Quotient <i>c</i> decimal
36	1	36/1	36	36.00
36	2	36/2	18	18.00
36	3			
36	4			
36	5	36/5	7.2	7.20
36	6			
36	7			
36	8			

Chart #2

Dividend <i>a</i>	Divisor <i>b</i>	<i>a/b</i>	Quotient calculation	Quotient <i>c</i> decimal
3	6	3/6	.5	.50
6	6	6/6	1	1.00
12	6	12/6	2	2.00
24	6	24/6	4	4.00
	6			
96	6			
192	6		32	
	6			