

Division with Remainders

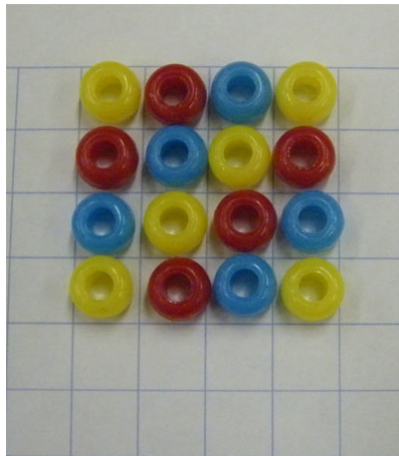
Subject: Mathematics
Strand: Number

Creator: Alison Kimbley
Grade: 4

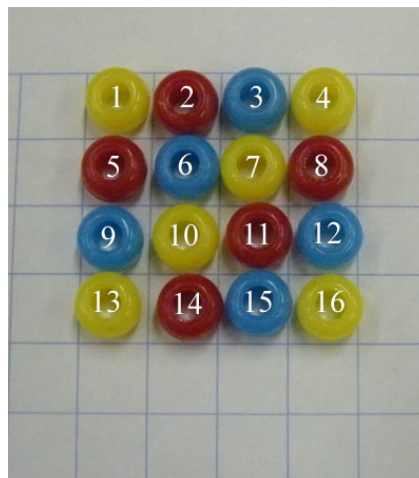
Content (topic)	
Exploring More Products	
Outcomes	Indicators
<p>N 4.5: Demonstrate an understanding of division (1-digit divisor and p to 2-digit dividend) to solve problems by:</p> <ul style="list-style-type: none">• Using personal strategies for dividing, with and without concrete materials• Estimating quotients• Solving problems involving division of whole numbers• Relating division to multiplication	<p>N 4.5 a: Solve a division problem without a remainder using arrays or base ten materials.</p> <p>N 4.5b: Solve a division problem with a remainder using arrays or base ten materials</p> <p>N 4.5c: Solve a division problem using a personal strategy and record the process symbolically.</p>
Mathematical Processes:	
<ul style="list-style-type: none">• Communication• Connections• Problem Solving• Mental Mathematics and Estimation• Reasoning• Visualization	
Lesson Preparation	
Equipment/materials:	
<ul style="list-style-type: none">• One centimeter graph paper• A loom• A set of pony beads• Wool• Markers/pencil crayons	
Advanced Preparation:	
<ul style="list-style-type: none">• *Instructions for making a loom*• Learn how to bead the loom.	
Presentation	
Development	
<ul style="list-style-type: none">• Teach the students about the significance of beads. For example, beading has been an important part of First Nations culture for approximately 8 000 years prior to European contact. Beads were made of shell, pearl, bone, teeth, stone, and fossil stems. Glass beads became a part of First Nation and Métis culture when the explorers came from Europe and brought seed and glass beads as trading items.• Explain to students that each tribe had distinct designs, patterns, and	

approaches; therefore, collections of First Nations beadwork art includes many different designs, styles, traditions and stitches. In Saskatchewan, the Plains Cree People use a lot of symmetry in their patterns as well as distinctive geometrical shapes.

- Have the students use four columns of the graph paper to simulate the loom as explained in a [previous lesson](#). Using **three** colored markers or pony beads, have the students create the following pattern:



- Ask the students:
 - *If you continued the pattern and used 28 beads, how many rows would you have on the loom? How many blue beads would you have on the loom?*
 - *If you had 35 beads, how many rows could you make? How many beads would be left over (i.e. remainder)*
- (Extension) Ask the students:
 - *Imagine if the beads were numbered:*



- *In what row is the bead number 30?*
- *In what row is the bead number 74? What color is the bead?*