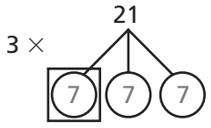
Math Background

Introduction to Division

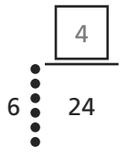
In Unit 1 students worked with methods for solving division problems, such as patterns in count-bys, equal-shares, and Fast Arrays.

Patterns in Count-bys:

Equal-Shares:



Fast Array:



From a basic conceptual understanding of division, students are then able to develop more sophisticated means for solving division with larger numbers. Three division methods are shown below. In all three methods students find partial answers that are combined in the end for the final quotient.

Rectangle Sections Method

5 | 280	50	50 +	50 +	50 + 6	50 + 6 = 56
	5 | 280	5 | 280 |	5 | 280 | 30	5 | 280 | 30	5 | 280 | 30
	−250	−250 |	−250 |	−250 | −30	−250 | −30
		30	30	30 0	30 0

Expanded Notation Method

			6	6	6 ⌐56
	50	50	50	50	50
5⟌280	5⟌280	5⟌280	5⟌280	5⟌280	5⟌280
	−250	−250	−250	−250	−250
		30	30	30	30
				− 30	− 30
				0	0

Digit-by-Digit Method

	5	5	5	56	56
5⟌280	5⟌280	5⟌280	5⟌280	5⟌280	5⟌280
	−25	−25	−25	−25	−25
		3	30	30	30
					− 30
					0

Problem Solving

Real-World Problem Solving

Throughout the unit, real-world situations are used as the context for problem-solving situations. Students use Solve and Discuss methods to apply strategies for solving division of large numbers.