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| **Fluency of Multiplication and Division Facts** |
| Recalls and demonstrates multiplication and divisions facts to 5 × 5.“I know that 4 × 6 = 24 and that 24 ÷ 6 = 4. The array shows both facts.” | Uses inverse operations to solve multiplication and division problems.“I can rewrite 24 ÷ 6 = ?as 6 × ? = 24.” | Uses known facts to determine unknown facts “I can use the distributive property to split the multiplication into facts that I know, then add.”5 × 9 = 5 × 5 + 5 × 425 + 20 = 45 | Fluently creates and solves whole number multiplication and division problems. There are 56 basketballs with the same number on each of 8 shelves.8 × □ = 56, so 56 ÷ 8 = □ 8 × 7 = 56Or8 × 7 = 4 × 7 + 4 × 7  = 28 + 28  = 56 |
| **Observations/Documentation** |
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| **Representing Multiplicative Relationships as Rates** |
| Solves unit rate problems concretely and pictoriallyIt takes 6 apples to make an apple pie. How many apples are needed to make 9 pies?“I used a number line to show how the number of apples increases as the number of pies increases.” | Uses various tools to solve multiple unit rate problems.Kiran and Simi walk 30 km. Kiran walks 5 km per hour and Simi walks 6 km in one hour. How long will it take each person to walk 30 km?“I used a ratio table. It makes it easy to make comparisons and to solve the problem.” | Uses inverse relationships to record and solve unit rate problems Marc paddled a canoe 10 km in 150 minutes. At what rate did he paddle?“10 km × **rate per minute** = 150 minutesI thought division: 150 ÷ 10 = ? I know 10 × **15** = 150. So, Marc paddled at the **rate of 15 km per minute.”** | Flexibly applies multiplicative reasoning to solve different types of unit rate problems. Shila cuts lawns in the neighborhood and charges $7/hour. If Shila works for 6 hours each week, how many hours will Shila need to work to make $168?“I know that Shila makes $42 a week (7 × 6 = 42). From the ratio table, Shila will make $168 dollars after 24 hours of work.” |
| **Observations/Documentation** |
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