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| **Multiplication with 0.01 and 0.1** |
| Explores and generalizes patterns using place-value relationships. 21 × 0.0121 × 0.121 ×121 × 1021 × 100What patterns do you notice?“I see a growing pattern. The multiplier is 10 times bigger than the previous multiplier each time.” | Uses place-value patterns and multiplication properties to solve equations.21 × 0.01 = ? 43 × 0.1 = ?“I know that to multiply by 0.01, I move the digits two place-value positions to the right: 21 x 0.01 = 0.21.To multiply by 0.1, I move the digits one place-value position to the right: 43 x 0.1 = 4.3.” | Uses mental math to solve multiplication problems.Jeremiah wants to add a 20% tip to the bill. Use this equation to calculate how much money Jeremiah will leave as a tip: $48 × 0.20 = ?“I know how to multiply by 0.1, so I rewrote the equation as: $48 × 0.1 × 2.$48 × 0.1 = $4.80 and $4.80 × 2 = $9.60. Jeremiah will leave $9.60 as a tip.” | Solves multiplication problems flexibly, using a variety of strategies.   Determine 4 × 0.6.“I used doubles: 4 × 0.6 = 4 × 0.3 × 2 4 × 0.3 = 1.21.2 × 2 = 2.4So, 4 × 0.6 = 2.4” |
| **Observations/Documentation** |
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