Activity 23 Assessment
Multiplying 3-Digit Whole Numbers by Decimal Tenths

Multiplying and Dividing Whole Numbers by Decimal Tenths

Explores and generalizes patterns using place-value relationships.	Uses patterns, number relationships, and properties of operations to solve problems.	Uses algorithms and checks for reasonableness (e.g., partial products, standard algorithm).	Flexibly solves multiplication and division problems using a variety of strategies.
$245 \times 1 = 245$ $245 \times 0.1 = 24.5$ $245 \div 0.1 = 2450$ "When I multiply by 0.1, the digits shift one place to the right. When I divide by 0.1, the digits shift one place to the left."	$190 \times 0.4 = ?$ "I multiplied by 1 tenth first, then multiplied the product by 4." $190 \times 0.1 = 19.0$ $19.0 \times 4 = 76.0$ $190 \times 0.4 = 76.0$	$355 \times 0.5 = ?$ I used partial products to multiply, then estimated to check the reasonableness of my answer. 355 is close to 350. 0.5 is the same as one half. One half of 350 is 175. Since 177.5 is close to 175, my answer is reasonable."	$428 \div 0.4 = ?$ "I multiplied both numbers by 10 so I could work with whole numbers, then used an algorithm." $428 \div 0.4 = 4280 \div 4$

Column 3 worked example:

```
    3 5 5
 ×    0.5
    ─────
      2.5    0.5 × 5 = 2.5
    2 5.0    0.5 × 50 = 25.0
  1 5 0.0    0.5 × 300 = 150.0
  ───────
  1 7 7.5
```

Column 4 worked example:

```
      1070
  4)4280
    4↓↓
    ───
    028↓
     28↓
    ───
      00
```

Observations/Documentation