Mid-Chapter Checkpoint

Vocabulary
Choose the best term from the box to complete the sentence.

1. An ______ independent variable ______ has a value that determines the value of another quantity. (p. 341)
2. A variable whose value is determined by the value of another quantity is called an ______ dependent variable ______. (p. 341)

Concepts and Skills
Identify the independent and dependent variables. (CC.8.EE.9)

3. Marco spends a total of $d$ dollars on postage to mail party invitations to each of $g$ guests.
   dependent variable: ______d______
   independent variable: ______g______

4. Sophie has a doll collection with 36 dolls. She decides to sell $s$ dolls to a museum and has $r$ dolls remaining.
   dependent variable: ______r______
   independent variable: ______s______

Write an equation for the relationship shown in the table. Then find the unknown value in the table. (CC.8.EE.5)

5. $\begin{array}{c|cccc} x & 8 & 7 & 8 & 9 \\ \hline y & 42 & 55 & 63 & \end{array}$
   $y = 7x; 49$

6. $\begin{array}{c|cccc} x & 20 & 40 & 60 & 80 \\ \hline y & 4 & 8 & 16 & \end{array}$
   $y = \frac{x}{2}; 12$

Write an equation that describes the pattern shown in the table. (CC.8.EE.9)

7. The table shows how the number of pepperoni slices used depends on the number of pizzas made.

<table>
<thead>
<tr>
<th>Pepperoni Used</th>
<th>Pizzas, x</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pepperoni slices, y</td>
<td>34</td>
<td>51</td>
<td>85</td>
<td>153</td>
<td></td>
</tr>
</tbody>
</table>

$y = 17x$

8. Brayden is training for a marathon. The table shows how the number of miles he runs depends on which week of training he is in.

<table>
<thead>
<tr>
<th>Miles Run During Training</th>
<th>Weeks, w</th>
<th>3</th>
<th>5</th>
<th>8</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miles, m</td>
<td>8</td>
<td>10</td>
<td>13</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

$m = w + 5$

Chapter 9 353