1. Albert is at the store to buy new pencils. Each pencil costs $0.55. Albert has not decided how many pencils he will buy, but he will buy 0, 1, 2, 3, 4, 5, or 6 pencils. Let the variable $p$ represent the number of pencils that Albert decides to buy.

(a) If Albert decides to buy 5 pencils, what is the value of $p$?

(b) Each row in the following table corresponds to the different number of pencils that Albert might buy. Complete the table.

<table>
<thead>
<tr>
<th>$p$</th>
<th>The total amount of money Albert spends</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

(c) What is the domain of $p$?

(d) Write down an algebraic expression for the total amount of money that Albert has to spend if he decides to buy $p$ pencils. Hint: think about how you completed the table from part (b).

(e) It turns out that Al only has $2 to spend on pencils. Write down an open sentence that describes Al’s budget restriction. [See Chapter 3-6]

(f) What is the solution set for that corresponds to Al’s budget restriction from part (e) above? [See Chapter 3-6]
2. Bob is also at the store to buy new pencils and new notebooks. Each pencil costs $0.55 and each notebook costs $1.00. Bob will buy 0, 1, 2, or 3 pencils, and 2, 3, or 5 notebooks.

Let the variable \( p \) represent the number of pencils that Bob decides to buy.
Let the variable \( n \) represent the number of notebooks that Bob decides to buy.

(a) If Bob decides to buy 1 pencil and 3 notebooks, what are the values represented by \( p \) and \( n \)?

(b) Complete the following table

<table>
<thead>
<tr>
<th>( p )</th>
<th>( n )</th>
<th>The total amount of money Albert spends</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

(c) What is the domain of \( p \)?

(d) What is the domain of \( n \)?

(e) Write down an algebraic expression for the total amount of money that Bob has to spend if he decides to buy \( p \) pencils and \( n \) notebooks.

(f) It turns out that Bob only has $4 to spend on pencils and notebooks. Write down an open sentence that describes Bob’s budget restriction. [See Chapter 3-6]

(g) What is the solution set for that corresponds to Bob’s budget restriction from part (e) above? [See Chapter 3-6]