1-19 You write and notes for your design. 1-20 to 1-23 will help you to do this.

For example: here is work for pattern A

\[ A = 6 \]
\[ P = 12 \]
\[ A = 24 \]
\[ P = 24 \]
\[ A = 54 \]
\[ P = 36 \]

Area of Fig. n is
\[ m \times (text area of Fig. #1) \]

Perimeter of Fig. n is
\[ n \times (text perimeter of Fig. #1) \]
The perimeter & area for each ring design:

<table>
<thead>
<tr>
<th>Fig. #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>10</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) perimeter</td>
<td>12</td>
<td>24</td>
<td>36</td>
<td>48</td>
<td>60</td>
<td>240</td>
<td>1200</td>
</tr>
<tr>
<td>area</td>
<td>6</td>
<td>24</td>
<td>54</td>
<td>96</td>
<td>150</td>
<td>2400</td>
<td>60000</td>
</tr>
<tr>
<td>b) perimeter</td>
<td>16</td>
<td>28</td>
<td>42</td>
<td>56</td>
<td>70</td>
<td>280</td>
<td>1400</td>
</tr>
<tr>
<td>area</td>
<td>6</td>
<td>24</td>
<td>54</td>
<td>96</td>
<td>150</td>
<td>2400</td>
<td>60000</td>
</tr>
<tr>
<td>c) perimeter</td>
<td>16</td>
<td>32</td>
<td>48</td>
<td>64</td>
<td>80</td>
<td>320</td>
<td>1600</td>
</tr>
<tr>
<td>area</td>
<td>8</td>
<td>28</td>
<td>63</td>
<td>112</td>
<td>175</td>
<td>2800</td>
<td>70000</td>
</tr>
<tr>
<td>d) perimeter</td>
<td>12</td>
<td>24</td>
<td>36</td>
<td>48</td>
<td>60</td>
<td>240</td>
<td>1200</td>
</tr>
<tr>
<td>area</td>
<td>6</td>
<td>24</td>
<td>54</td>
<td>96</td>
<td>150</td>
<td>2400</td>
<td>60000</td>
</tr>
<tr>
<td>e) perimeter</td>
<td>12</td>
<td>24</td>
<td>36</td>
<td>48</td>
<td>60</td>
<td>240</td>
<td>1200</td>
</tr>
<tr>
<td>area</td>
<td>5</td>
<td>20</td>
<td>45</td>
<td>80</td>
<td>125</td>
<td>2000</td>
<td>50000</td>
</tr>
<tr>
<td>f) perimeter</td>
<td>16</td>
<td>28</td>
<td>42</td>
<td>56</td>
<td>70</td>
<td>280</td>
<td>1400</td>
</tr>
<tr>
<td>area</td>
<td>8</td>
<td>32</td>
<td>72</td>
<td>126</td>
<td>200</td>
<td>3200</td>
<td>80000</td>
</tr>
</tbody>
</table>

1-21: Figure will be an upside down square
with a top and left edge of 60 units, each
step will be 20 units. It will have a
perimeter of 240 units and an area of 2,400 units
\[ p = 20 \cdot 12 = 240 \]
\[ A = 20^2 \cdot 6 = 240 \cdot 6 = 2400 \]

1-22 a) See above for Table.
b) No graph as a discrete graph (points)
   because the company
does not sell a ring
   for $1.50.
c) 1st column by the same
   amount each time (straight line)
d) \[ p = n \cdot 6 \text{ perimeter of } \text{fig. } 1 \]
123 continued

1-23 a) See table on previous page
   b) Again, program is
determinate since there
is no figure 2.5!
   c) The area of the rug
grew up by a
bigger amount
each time. (Graph
does not lie only a parabola)
   d) A = n^2. (Area of Figure #1)

1-24 See table on previous page for Figure #100.

1-25 C. Now one 2 sides of 6x-1 & 2 sides of 2x+5
    which add to 120
    2(6x-1) + 2(2x+5) = 120
    12x - 2 + 4x + 10 = 120
    16x + 8 = 120
    16 = -8
    x = 7

1-26 No. If 0 points are collinear, non-rig
    will not form a line.

1-27 y = x - 3

1-28 a) 55.5 sq. units
    b) 42 sq. units

1-29 a) (3-2) - 5(3) + 8
    b) \( \frac{3}{5} (3) - 5(-2) \)
    c) \(-2 + 2(3) + 4(-2)\)
    d) \(-2 + 10\)
    e) \(-1 + 8\)