### A1: What gets printed?

<table>
<thead>
<tr>
<th>a = 0</th>
<th>a = 0</th>
<th>a = 0</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>while a &lt; 1: a = a + 1</code></td>
<td><code>while a &lt; 2: a = a + 1</code></td>
<td><code>while a &gt; 2: a = a + 1</code></td>
</tr>
<tr>
<td><code>print(a)</code></td>
<td><code>print(a)</code></td>
<td><code>print(a)</code></td>
</tr>
</tbody>
</table>

1

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### A2: What gets printed?

<table>
<thead>
<tr>
<th>a = 4</th>
<th>a = 0</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>while a &gt; 0: a = a - 1</code></td>
<td><code>while a &lt; 3: if a &lt; 2: a = a + 1</code></td>
</tr>
<tr>
<td><code>print(a)</code></td>
<td><code>print(a)</code></td>
</tr>
</tbody>
</table>

0

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### A3: What gets printed?

```python
a = 8
b = 12
while a != b:
    if a > b:
        a = a - b
    else:
        b = b - a
print(a)
```

- A: Infinite loop
- B: 8
- C: 12
- D: 4  **CORRECT**
- E: I don’t know

This is Euclid’s Algorithm for finding the greatest common factor of two positive integers. **Trivia:** It is one of the oldest recorded algorithms (~300 B.C.)