1. Find $\int x^4 e^{-x} \, dx$ and compute $\int_0^{10} x^4 e^{-x} \, dx$ exactly (with $e^{10}$ in it.)

2. Use the numerical integrator on your calculator (TI-X; X ≤ 86) to find $\int_0^{b} x^4 e^{-x} \, dx$ for these values of $b$. What calculator are you using? _________

<table>
<thead>
<tr>
<th>b</th>
<th>$\int_0^{b} x^4 e^{-x} , dx$</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
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<tr>
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</tbody>
</table>

3. Do the answers in 2 make sense? Explain.