Circle Calculation

Requirements

To produce a Python program that calculates and outputs the circumference and area of a circle given its radius. Assume that the radius is input by the user as a double. Area of a circle = PI x diameter = 2 x PI x radius, and Circumference = PI x radius\(^2\) (see Figure). (Use the constant pi from the python math module.)

\[
\text{Circumference} = \pi d = 2 \pi r \\
\text{Area} = \pi r^2
\]

Testing

<table>
<thead>
<tr>
<th>Test Case</th>
<th>Expected Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radius</td>
<td>Circumference</td>
</tr>
<tr>
<td>10.0</td>
<td>62.831853</td>
</tr>
<tr>
<td>0.0</td>
<td>0.000000</td>
</tr>
<tr>
<td>-10.0</td>
<td>-62.831853</td>
</tr>
</tbody>
</table>

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