Determine the center and radius of the circle: \( x^2 + (y - 2)^2 = 16 \). Sketch the graph.

(i) To find the center and radius, one can rewrite the given equation as...

\[
(x - 0)^2 + (y - 2)^2 = 4^2
\]

and observe that from the standard form of the equation of a circle, we conclude that...

\[ \therefore \text{the center is located at (0,2) and the radius is 4 units (in length)} \]

(ii) To graph the circle, we start with plotting the center point (0,2)...

...then find the two points which are 4 units from the center horizontally (left & right)...

...and two more points which are 4 units from the center vertically (upward & downward)...

...finally, we can complete the graph by drawing the circle through these 4 points...

Thus the rendering of our completed answer is...