

QUESTION 1: THE FOLLOWING IS A PROBLEM STATEMENT:

Develop a program that calculates the area of a circle.

The program should prompt the user for the radius.

Assume the user enters a value of 5.0.

The program should calculate the area of the circle.

The program should display the area of the circle.

Write the program in C++.

Include the necessary header files.

Use the constant PI to represent the value of pi.

The program should use the following code to calculate the area of the circle:

```
double area = PI * radius * radius;
```

The program should use the following code to display the area of the circle:

```
cout << "The area of the circle is: " << area << endl;
```

The program should use the following code to prompt the user for the radius:

```
cout << "Enter the radius: ";
```

The program should use the following code to read the radius:

```
double radius;
```

The program should use the following code to calculate the area of the circle:

```
double area = PI * radius * radius;
```

The program should use the following code to display the area of the circle:

```
cout << "The area of the circle is: " << area << endl;
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The program should use the following code to prompt the user for the radius:

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cout << "Enter the radius: ";
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double radius;
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