

Q1

Assignment Content



Quiz_01.pdf



Page 1 of 1

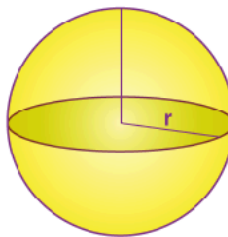


COSC 237 Quiz 01

Name: _____

[5pts] Define a class named **Circle** with the following properties: The center (x, y) -coordinate of type `double`, and a radius also of type `double`. The center can be anywhere in the 2D plan; however, the radius of the circle must be positive. Write Java code for this **Circle** class including all required methods (e.g., constructors, getters, setters, `toString()`, etc) and the two methods to find the perimeter and the area of the circle. Note that two circles are equal if they have the same coordinates and the same radius.

[5pts] Define a class name **Shpere** to represent a 3D shpere, which is defined by a 3D center point (x, y, z) of type `double` (Fig. 1). **Shpere** class must inherite from **Circle** and you must define its own variable(s). Write Java code for this class including all required methods (e.g., constructors, getters, setters, `toString()`, etc) and methods to find the perimeter, area and volumne of the sphere. Use the provided **Q1Client.java** to test your code. Reuse the code as much as possible. Note that two shperes are equal if they have the same coordinates and the same exact shape.

Fig. 1: A shpere with radius r