

Question 1 report:

I chose to use an enum because I could store a different number of values with each variant, and could write a different implementation of each method for each variant. This was done using pattern matching. I thought this would be tough to do using structs since it is not as easy to pattern match. Structs are better used when you want to represent one specific item, while enums are better to represent an item that has variants. In this case, we have Shape, which is a category, and we want Shape to have variants Circle, Rectangle, and Triangle, so an enum made the most sense

Question 2 report:

This shows how similar the area of a circle inscribed into a regular polygon is. The circle area was consistently less than the polygon area. When looking at inscribed circles, I calculated how much larger the polygon was than the circle, using percentage of area instead of the raw numbers. Doing this, you can see that as the number of sides gets larger, the area of a circle using the same radius gets closer and closer to the area of the polygon. In other words, at a high number of sides, a polygon can approximate the area of an inscribed circle. If I were to use a circumscribed circle, or use the radius of the polygon to compute the circle radius, then the circle area is slightly larger, but the percentages are the same.