Figure 2 Circle Problem 1

Problem 5 A triangle contains five circles as shown in **Figure 2**. The two top circles have radius 9, the two bottom circles radius 25. What is the radius of the middle circle? Explain your answer.

Problem 6 Six circles are inscribed a triangle as shown in **Figure 3**. The three small circles have the same size, the middle circle has radius 1. What is the radius of the large circle? Explain your answer.

Problem 7 Circles are arranged as shown in **Figure 4**, with the letters indicating radii. Show that $1/a + 1/c = 1/b + 1/d$. Explain your answer. This is not quite as hard as it looks...
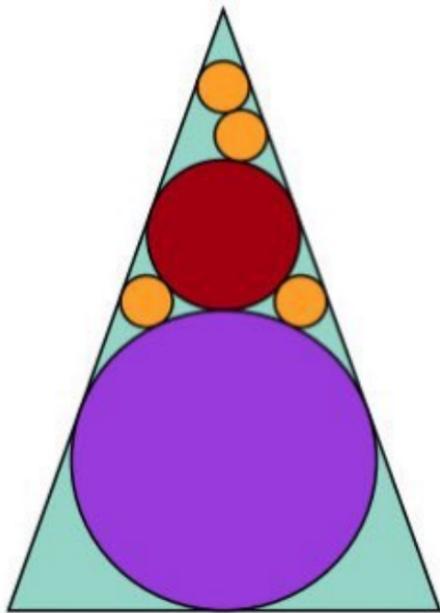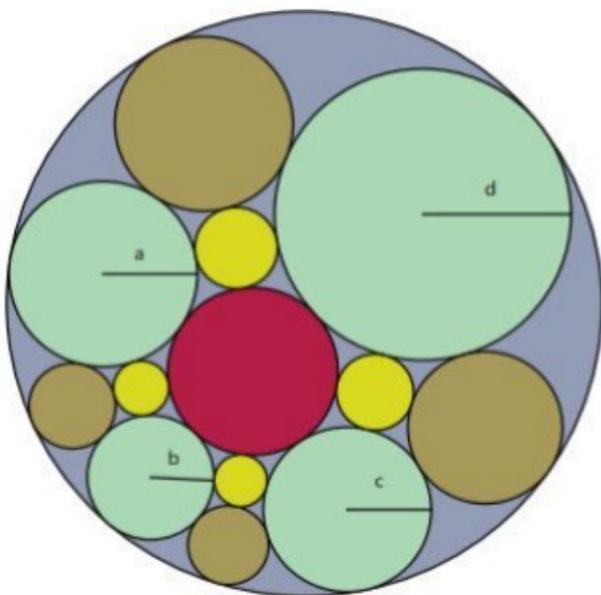
Figure 3   Circle Problem 2

Figure 4   Circle Problem 3