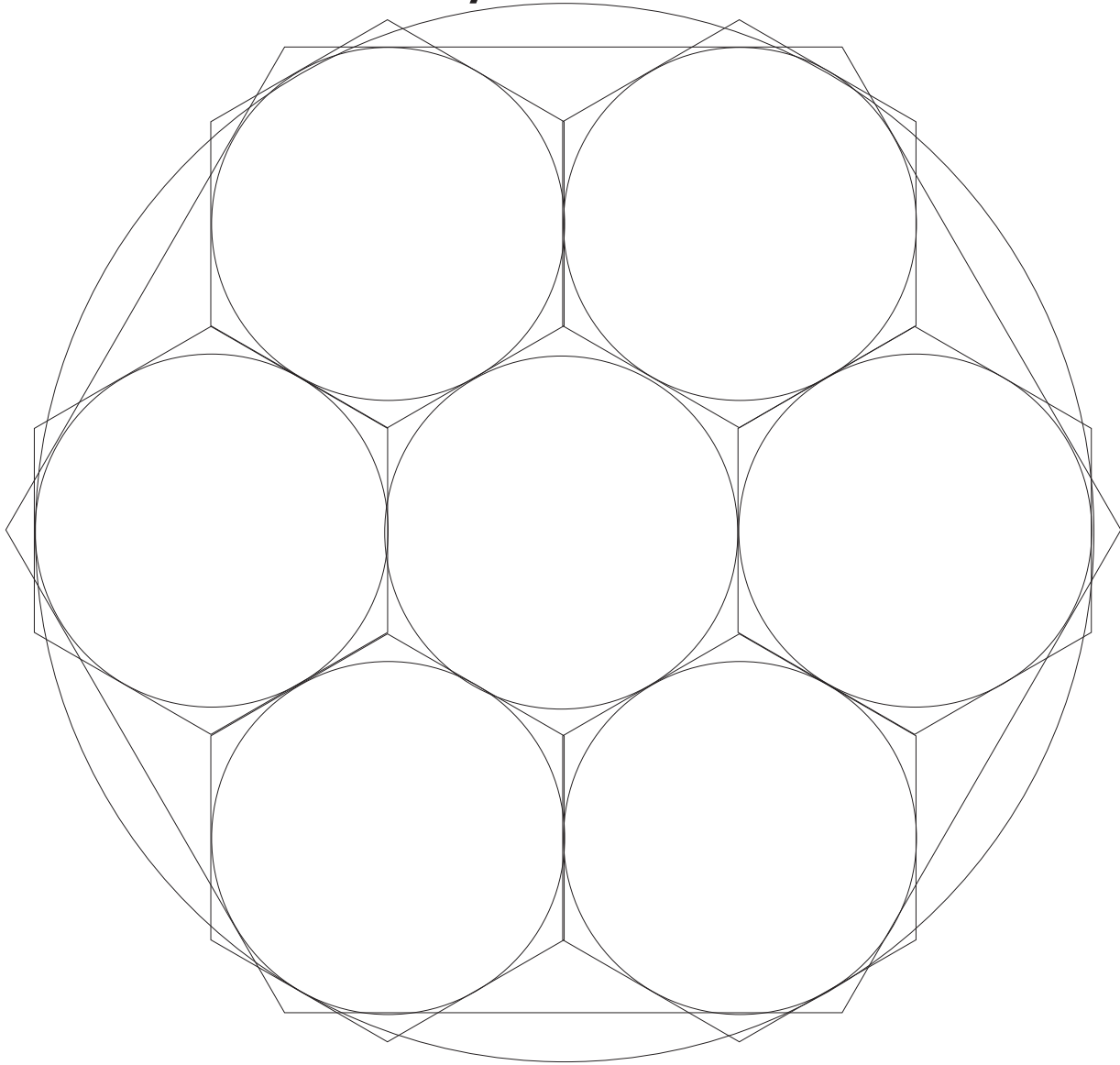


For Closely nested Circles



For a unit radius:: $r=1$
horiz pitch =2; vert pitch = $\sqrt{3}$
circ: $r=1$, $a=\pi$; sum circ area = 7π
CIRC: $R=3$, $A=9\pi$
hex: $r=1$, $a=2\sqrt{3}$; sum= $14\sqrt{3}$
HEX: $r=1+\sqrt{3}$, $A=4(3+2\sqrt{3})$