**(Q1)** $-1.493339518$

**(Q2)** $p_2 = 1.20000$ , $p_3 = 1.31066$

**(Q3)** $0.999999995$

**(Q4)** $1.146193221$

**(Q5)** (a) $M = 2$

(b) $R = 1$ , $A = \frac{1}{2}$

(c) $p_1 = 3.142067997$ , $p_2 = 3.141592654$

(d) $R = 1$ , $A = \frac{1}{2}$

(e) $R = 1$

(f) $R = 1$

**(Q6)** $R = 3$ , $A = 0.8$

**(Q7)** $R = 1$ , $A = 0.75$

**(Q8)** (a) $R = 2$ , $A = 0.125$          (b) $R = 1.618$ , $A = 0.28$

**(Q9)** (a) $g(\sqrt{2}) = \sqrt{2}$          (b) $R = 3$ , $A = 0.125$