Name: _____ Quiz 2: Asymptotic Analysis (10 pts)

1. [10 points] For each function on the left, $p(n)$, write the letter of a function on the right, $q(n)$, such that $p(n) = \Theta(q(n))$. If no such function $q(n)$ is listed, then choose (l). Briefly explain.

   You will get full credit as long as you answer 2 of these correctly

$f(n) = \sum_{i=1}^{n}(4i - 4)$ _____

$g(n) = \sum_{i=1}^{n}\sum_{j=1}^{i} i$ _____

$h(n) = \sum_{i=1}^{\log n} n$ _____

$k(n) = \sum_{i=0}^{n} \frac{4}{2^i}$ _____

(a) 1
(b) n
(c) $n(\log n)^2$
(d) $n^2 \log n$
(e) 2^n
(f) n^n
(g) $\log n$
(h) $n \log n$
(i) n^2
(j) n^3
(k) 2^{2n}
(l) no match