$$CMP = \frac{Y^{2/3}}{(CEP)^2} \cdot 10$$

One of the drawbacks involved in using CMP is that it is not strictly a measure but a numerical expression of potential. Since there are no units of CMP, the equation simply generates a numerical value unique to each combination of yield and accuracy. It can be used most effectively as a general idea of design efficiency. For example, CMP provides a way of qualitatively comparing individual missile systems. To illustrate by reference to CMPs for the Soviet ICBM force, the table indicates that the warheads of the SS-18 are as much as 20 times more efficient than those of the earlier generation SS-11's. The U.S. Mark 12A warhead on the Minuteman III is almost 3 times more efficient than that of the earlier Minuteman III.

Single Shot Kill Probability (SSKP)

This calculation is designed to measure the ability of a single warhead to hit and destroy hardened targets, in particular hardened missile silos. Single Shot Kill Probability is "the probability that a single reliable warhead can be expected to destroy a given target."[11] SSKP is expressed mathematically in the following equation, where it can be seen that the critical variables are yield, CEP and hardness.

$$SSKP = 1 - 0.5^{\frac{(8.41Y^{2/3})}{H.^{7}(CEP)^2}}$$

CEP=circular error probable
Y=yield
H=hardness

10 D. Ball, "The Future of the Strategic Balance", in (ed. L. Hagen) The Crisis in Western European Security (St. Martin's Press, N.Y., 1982); See also K. Tsipis Arsenal (New York: Simon&Schuster, 1983) pp. 305-308; and IISS The Military Balance 1985-1986, p.179

11 L.E. Davis and W.R. Schilling, "All You Ever Wanted to Know About MIRV and ICBM Calculations But Were Not Cleared to Ask", Journal of Conflict Resolution vol. 17 no.2, June 1973, p. 210