Pringles Challenge: Scoring

Three measurements must be collected in order to score a package for the Pringles Challenge.

1. Mass - measured in kilograms to at least 3 significant figures
2. Volume - measured in cubic centimeters to at least 3 significant figures
3. Intactness score of the chip as determined by the evaluating school, according to the chart below

Intactness	Description	Chip Score
Perfectly Intact	Like it just left the factory	100 Points
Slightly Damaged	Cracked, but still in one piece	50 Points
Chipped Chip	Broken along the edges, but less than 5 pieces	10 Points
Split Chip	The chip is broken into two fairly equal pieces	10 Points
Significantly Damaged	Chipped and/or cracked into less than 20 pieces	5 Points
Pringle Dust	Too many pieces to count (more than 20)	1 Point

Overall Score

The overall score of the package will be used to compare packages. As your goal is a high intactness score coupled with a small mass and volume, a higher overall score is better. The formula for calculating the overall score is as follows:

Overall Score = $\dfrac{\text{Intactness Score}}{(\text{Mass in kg x Volume in cc})}$

Example:
   a) A perfect chip = Intactness of 100
   b) Mass = 256 grams or 0.256 kg
   c) Volume = 250 cc (2.5 x 10^2)

Overall Score = (100/(.256 x 250)) = 100/64 = 1.56 (when rounded to 3 significant figures)