# CROSS SECTION

## AN INTRODUCTION TO NUCLEAR AND PARTICLE PHYSICS SCATTERING EXPERIMENTS

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# Introduction

## 1.1 Scattering Experiment

Here we will explore three different definitions of a tensor. Starting from the weakest to the most powerful.

### 1.1.1 A Multidimensional Array

A tensor can be seen a simple multidimensional array of numbers.

The first and most basic tensor is called a scalar which is an array with zero dimension, also called a rank zero tensor. Scalars are then just numbers. Examples include $1, 2, -1, \pi$