Test sheet for photographic data collection

Inverse problems are the opposites of direct problems. Informally, in a direct problem one finds an effect from a cause,

and in an inverse problem one is given the effect and wants to recover the cause. The most usual situation giving rise to an inverse problem is the need to interpret indirect physical measurements of an unknown object of interest. For example in medical X-ray tomography the direct problem would be to find out what kind of X-ray projection images would we get from a patient whose internal organs we know precisely. The corresponding inverse problem is to reconstruct the three-dimensional structure of the patient's insides given a collection of X-ray images taken from different directions.