

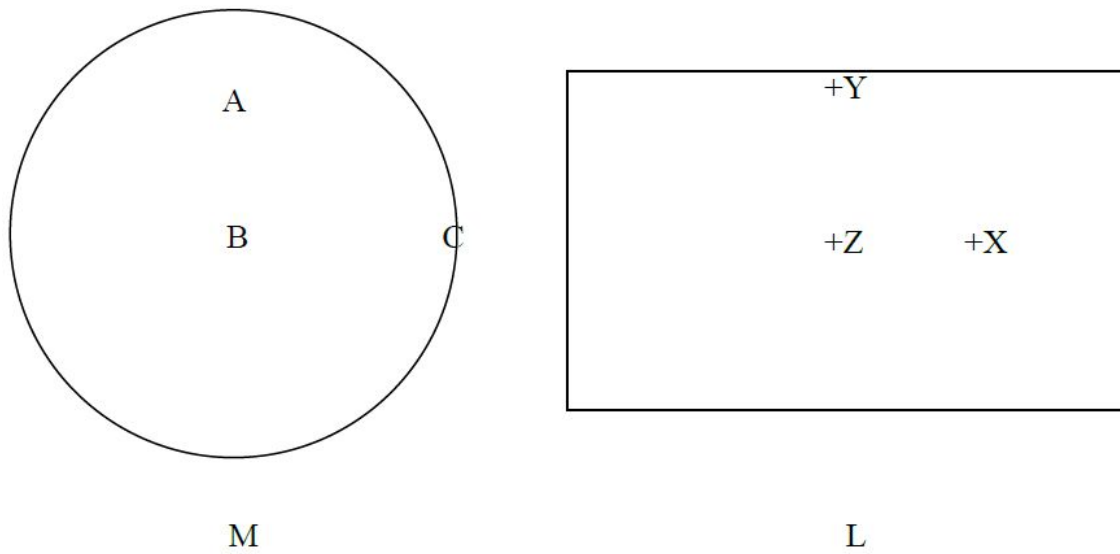
COMP 70001 Tutorial 1

- Given a set of LDR values measured at two different pixels (i, ii) two stops apart at five exposure settings, compute the corresponding normalized HDR value $[0, 1]$ assuming a linear camera response and the following weighting schemes:
 - i) 3, 13, 50, 195, 255 (weighting according to a hat function, i.e., giving higher weights to middle exposures)
 - ii) 0, 0, 12, 45, 182 (uniform weighting)

Also list which exposures are considered for HDR computation in each case.

- Given an irradiance value measured on a camera sensor of 0.1 with the following settings of exposure = 0.2 sec, aperture = f/8, & ISO = 100, compute the measured irradiance with the following camera settings:
 - i) exposure = 0.4 sec, aperture = f/8, ISO = 100
 - ii) exposure = 0.2 sec, aperture = f/16, ISO = 100
 - iii) exposure = 0.2 sec, aperture = f/8, ISO = 400, ND = 1.0

- Given a light probe in mirror ball format M and lat-long format L with the coordinate axes as shown below, mark on L the directions (pixels) A, B, & C reflected on the mirror ball M.



Also write the Cartesian coordinates of A,B & C in L and the surface normals of the points in M.