FPST 1373 Detection Spacing Outline

I. Spacing requirements
   a. Data sheet gives maximum distance between detectors (S)
   b. Detector in the middle of its coverage area
      i. Maximum S/2 to wall
      ii. Maximum 0.7*S to corner
   c. 4 in from wall or other obstruction
   d. Within 12 in of ceiling
   e. Space ideally
      i. Check each direction separately
      ii. Equal area covered by all detectors gives best performance

II. Number of detectors
   a. Must cover entire area
   b. Can subdivide larger area when not uniform

III. Spacing rules
   a. Must look up adjustments for different ceiling conditions
      i. NFPA72
      ii. Slides
   b. Different rules for heat detectors and smoke detectors
   c. Flat ceiling
   d. Corridors
      i. Geometry for distance smoke travels
   e. Joists and beams
      i. Obstructions on the ceiling
      ii. Slow down spread of smoke perpendicular, no impact in parallel
   f. High ceilings
      i. Smoke takes longer to rise
   g. Peaked and sloped ceilings
      i. Smoke rises, so detector at or near peak
   h. Consider walls
      i. More than 18 in gap is same as no wall
   i. See NFPA72 Annex B for advanced designs