



### Types of copy

- Line copy
  - Type
  - Art - solid black lines

### Continuous tone

- Photographs
- Art
  - Shaded chalk or pencil drawings
  - Black and white watercolor
- Color
  - Photographs – reflection
  - Slides(transparencies) – transparent

### Line film exposure test

- Used to determine
  - Exposure time
  - Best f/stop
- Copy choice
  - Roman type with serifs
  - Good black type with white background

### Exposure steps

- Start two stops from wide open
- Use 5 sec/unit steps
- Process

### Evaluate

- Type clear, sharp and unbroken
- Background is dense
- Overexposed - fine serifs and strokes closing in
- Underexposed - Type fatter than original, background with excessive pinholes

## The gray scale

- Sensitivity guide



## Density

- Measure of the blackness of film or photographic paper
- All light reflected = 100 % reflectance = 0 density
- Density falls within 0 - 3 range
- Density measurement
  - Densitometer
    - Reflection - measures reflectance from opaque copy
    - Transmission - measures transmission through transmission copy



## Gray scale

- Steps from white (0 density) to black (3.0 density)
- Steps - 10, 12, 14, or 21
  - Same range, but more or less difference between steps
  - 10 step/3 = .30 between steps, 21 step/3 = .14
- Transmission - used for contacting and platemaking
- Reflection - camera operations



## Gray scale math

- Changing f/stops
- Larger (opening) to smaller, f/11 to f/16, one half the amount of light passes through the lens
  - Divide by 2
- Smaller (opening) to larger, f/16 to f/11, twice the amount of light passes through the lens
  - Multiply by 2



## Gray scale math

- .15 density between two steps
- Double the exposure to move two steps up (higher)
- Halve the exposure to move two steps down the scale

