Interlacing is a technique that allows the image to be viewable and get the original point across without fully loading the image all at once. It does so by separating the image into sub-images. Note that the data will not be continuous anymore as it will jump around the image more.

# Standard Interlacing (GIF)

GIF images use a simple method of interlacing that finishes in 4 passes.

* 1st pass: (8n) + 0
* 2nd pass: (8n) + 4
* 3rd pass: (4n) + 2
* 4th pass: (2n) + 1

These equations refer to what row of pixels the data refers to whether that means reading or writing.

# Adam7 Interlacing (PNG)

PNG images uses Adam 7 interlacing which finishes in 7 passes. It interlaces in both the x and y directions.

* The first pass has 1/64 of the image done
  + tempWidth = imageWidth/8
  + tempHeight = imageHeight/8
  + offsetX = 0
  + offsetY = 0
* The second pass has 1/32 of the image done
  + tempWidth = imageWidth/4
  + tempHeight = imageHeight/8
  + offsetX = 4
  + offsetY = 0
* The third pass has 1/16 of the image done
  + tempWidth = imageWidth/4
  + tempHeight = imageHeight/4
  + offsetX = 0
  + offsetY = 4
* The fourth pass has 1/8 of the image done
  + tempWidth = imageWidth/2
  + tempHeight = imageHeight/4
  + offsetX = 2
  + offsetY = 0
* The fifth pass has 1/4 of the image done
  + tempWidth = imageWidth/2
  + tempHeight = imageHeight/2
  + offsetX = 0
  + offsetY = 2
* The sixth pass has 1/2 of the image done
  + tempWidth = imageWidth
  + tempHeight = imageHeight/2
  + offsetX = 1
  + offsetY = 0
* The seventh (and final) pass has all the image done
  + tempWidth = imageWidth
  + tempHeight = imageHeight
  + offsetX = 0
  + offsetY = 1

The general equation may look something like this

X = offsetX + (n/tempWidth) \* imageWidth

Y = offsetY + (m/tempHeight) \* imageHeight

The values refer to what pixel the data refers to whether that means reading or writing.