digital differential analyzer *(DDA) routine for rasterizing a line*
the line end points are (x_1, y_1) *and* (x_2, y_2)*, assumed not equal*
Integer *is the integer function. Note: Many Integer functions are floor functions; i.e.,* Integer$(-8.5) = -9$ *rather than* -8*. The algorithm assumes this is the case.*
Sign *returns* $-1, 0, 1$ *for arguments* $< 0, = 0, > 0$*, respectively*

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approximate the line length
if abs(x2 − x1) ≥ abs(y2 − y1) then
    Length = abs(x2 − x1)
else
    Length = abs(y2 − y1)
end if
select the larger of Δx or Δy to be one raster unit
Δx = (x2 − x1)/Length
Δy = (y2 − y1)/Length
round the values rather than truncate, so that center pixel addressing
  is handled correctly
x = x1 + 0.5
y = y1 + 0.5
begin main loop
i = 1
while (i ≤ Length)
    setpixel (Integer(x), Integer(y))
    x = x + Δx
    y = y + Δy
    i = i + 1
end while
finish
```

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