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Step 1: Start Algorithm
Step 2 Declare $x_1, y_1, x_2, y_2, dx, dy, x, y$ as integer variable
Step 3 Enter value x_1, y_1, x_2, y_2
Step 4 Calculate $dx = x_2 - x_1$
Step 5 Calculate $dy = y_2 - y_1$
Step 6 if ABS (dx) > ABS (dy)
Then step = abs (dx)
Else
Step 7 : $x_{inc} = dx/step$
$y_{inc} = dy/step$
assign $x = x_1$
assign $y = y_1$
Step 8 - Set pixel (x, y)
Step 9 = $x = x + x_{inc}$
$y = y + y_{inc}$
Set pixels (Round (x), Round (y))
Step 10 - Repeat step 9 until $x = x_2$

Step 11 : End Algorithm

=) Write a pgm program to draw a line using DDA

```
#include <stdio.h>
#include <graphics.h>
int main()
{
    int round(float num)
    {
        return (num<0? num-0.5 : num+0.5);
    }
    int x1 = 100*2 = 250, y1 = 100, y2 = 250, step;
    ~~int dx = x2 - x1;~~
    ~~int~~
    int gd = DETECT, gm;
    float x, y, m;
    int dy = y2 - y1;
    m = dy/dx
    if (dx>dy)
        step = dx;
    else
        step = dy;
    initgraph (&gd, &gm, "");
    outtextxy (x2, y1, "B")
    outtextxy (x2, y2, "B")
    putpixel (x1, y1, Red);
    x = x1, y = y1;
    while (step>0)
    {
```

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```
if (m<1)
{
    x = x + 1
    y = y + m;
}
if (m>=1)
{
    x = x + 1/m;
    y = y + 1
    Putpixel (round(x), round(y), RED);
    Step ...;
}
getch();
return 0;
}
```

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