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[Answer (8)

(1) If $d <= 0$ then $Nx+1, y$ i.e. $x+1, y$ is to be chosen as next pixel.

(2) If $d > 0$, then $x+1, y-1$ i.e. $x+1, y-1$ is to be chosen as the next pixel Algorithm

step 1 → Get the coordinates of the center of the circle and radius and store them in x, y, and R respectively. set $P=0$ and $Q=R$.

step 2 → set decision parameter $D = 3-2R$.

Step 3 → Repeat through step-8 while $P \leq Q$

Step 4 → call Draw circle x, y, P, Q x, y, P, Q.

Step 5 → Increment the value of P.

step 6 → If $D < 0$ then $D = D + 4P + 6$.

Step 7 → Else set $R = R-1$, $D = D + 4P - 4R - 4 + 10$.

Step 8 → call Draw circle x, y, P, Q x, y, P, Q.

Program 1 →

```
#include <stdio.h>
#include <graphics>
void main()
{
int gd=DETECT, gm;
int r, x, y, p, xc=300, yc=240;
printf("enter the radius");
scanf("%d", &r);
initgraph(&gd, &gm, "");
x=0;
y=r;
putpixel(xc+x, yc-y, 1);
p=3-(2*r)
for(x=0; x<=y; x++)
{
if (p<0)
{
y=y;
p=(p+(4*x)+6);
}
```

```
else{
y = y-1;
p = p+((4*(x-y)+10));
}
putpixels(xc+x, yc-y, 1);
putpixels(xc-x, yc-y, 2);
putpixels(xc+x, yc+y, 3);
putpixels(xc-x, yc+y, 4);
putpixels(xc+y, yc-x, 5);
putpixels(xc-y, yc-x, 6);
putpixels(xc+y, yc+x, 7);
putpixels(xc+y, yc+1, 8);
}
getch();
closegraph();
}
```