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verbatimtex \input chert etex;

beginfig(1);

def phi(expr x, sigm) = mexp (-(x**2)/(2*sigm**2))/(sigm*sqrt (2*3.14)) enddef;

numeric ux, uy;
ux = 2mm; uy = 25mm;

drawarrow (-40ux,0)--(40ux,0);
drawarrow (0,0)--(0,25ux);

path f;
numeric gg; gg=0.4;
numeric start; start=0;

f = (0*ux , phi(0, gg)*uy ) {right}
for i=1 upto 34: .. ((start+ i)*ux, phi(start + i, gg)*uy ) endfor;

path ff;
ff = ( (start + 32)*ux ,0)--((start + 8)*ux,0){right}
for i=8 upto 34: -- ((start+ i)*ux, phi(start + i, gg)*uy ) endfor
--cycle;

draw f;
draw f reflectedabout ((0,-1),(0,1));
fill ff withcolor 0.5(0,151,10) +0.5white ;

z1=((start + 8)*ux,0);
fill fullcircle scaled 5 shifted z1 withcolor blue;
draw ((start + 8)*ux,0)--((start+ 8)*ux, phi(0 + 8, gg)*uy ) withcolor blue ;

endfig;

end.

```