```
"parabool, XY ja F"
funkt = y^2 - 2 p x
XY = {x, Sqrt[2 p x]}
F = {p / 2, 0}
(*"X ja Y muut"*)
muut = XY - F
"sirge"
sirge = {x → x + t * (x - p / 2), y → Sqrt[2 p x] + t * Sqrt[2 p x]}
(*sirge1={a→x+t(x-p/2),b→Sqrt[2 p x]+t Sqrt[2 p x]}*)
"sirge läbi punktide F ja X"
tvaart = Solve[(funkt /. sirge) == 0, t]
"x ja y vaart"
tv = Simplify[sirge /. tvaart[[2]]]
"Ainult x ja y"
XU = {x, y} /. tv
"Keskpunkt K"
(*K=Simplify[ (XY+XU)/2 ] → keskpunkt*)
K = Mean[{XY, XU}]
(*Endine R: ALTR=Simplify[(XY-K).(XY-K)] Raadius → ()^2+()^2*)
"Raadiuse pikkus"
R = Simplify[Sqrt[(XY[[1]] - K[[1]])^2 + (XY[[2]] - K[[2]])^2]]
"K-s x asendatud λ-ga"
Kasen = K /. x → λ
"R-s x asendatud λ-ga"
Rasen = R /. x → λ
(* Parve võrrand *)
parvor = (x - Kasen[[1]])^2 + (y - Kasen[[2]])^2 - Rasen^2;
(* Tuletis parve võrrandist λ järgi *)
dparvor = D[parvor, λ];
mahised = Solve[Eliminate[{dparvor == 0, parvor == 0}, λ], x];
mahis = mahised[[1]];
(* Uus keskkoht *)
KU = K /. {p → 2, x → λ} (*sisestame p ja x väärtused*)
(* Uus raadius *)
RU = R /. {p → 2, x → λ}
(* Ringide valemid *)
ylemised = Table[{KU[[1]] + RU Cos[t], KU[[2]] + RU Sin[t]}, {λ, 1, 20}];
alumised = Table[{KU[[1]] + RU Cos[t], -KU[[2]] + RU Sin[t]}, {λ, 1, 20}];
(* Ringide ja parabooli graafikud *)
ringid1 = ParametricPlot[ylemised, {t, 0, 2 Pi}];(*ringid*)
ringid2 = ParametricPlot[alumised, {t, 0, 2 Pi}];(*ringid*)
parabool = ParametricPlot[{{t, 2 Sqrt[t]}, {t, -2 Sqrt[t]}},
    {t, 0, 20}, PlotStyle → {{Blue, Thickness[0.006]}}];(*parabool*)
punktid = Table[{x /. mahis[[1]] /. p → 2 , i}, {i, -15, 15}];
mahisjoon = ListLinePlot[punktid, PlotStyle → {Red, Thickness[0.01]}];
(*mähisjoon*)
fookus = Graphics[{AbsolutePointSize[5], Red, Point[{1, 0}]}];(*fookus*)
Show[fookus, mahisjoon, ringid1, ringid2, parabool, AspectRatio → Automatic,
 PlotRange → Automatic, Axes → True, GridLines → Automatic]
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Out[ ]= parabool, XY ja F

Out[ ]= $-2 p x + y^2$

Out[ ]= $\left\{ x, \ \sqrt{2} \ \sqrt{p x} \right\}$

Out[ ]= $\left\{ \dfrac{p}{2}, \ 0 \right\}$

Out[ ]= $\left\{ -\dfrac{p}{2} + x, \ \sqrt{2} \ \sqrt{p x} \right\}$

Out[ ]= sirge

Out[ ]= $\left\{ x \to x + t \left(-\dfrac{p}{2} + x \right), \ y \to \sqrt{2} \ \sqrt{p x} + \sqrt{2} \ t \ \sqrt{p x} \right\}$

Out[ ]= sirge läbi punktide F ja X

Out[ ]= $\left\{ \{ t \to 0 \}, \ \left\{ t \to \dfrac{-p - 2 x}{2 x} \right\} \right\}$

Out[ ]= x ja y vaart

Out[ ]= $\left\{ x \to \dfrac{p^2}{4 x}, \ y \to -\dfrac{p^2}{\sqrt{2} \ \sqrt{p x}} \right\}$

Out[ ]= Ainult x ja y

Out[ ]= $\left\{ \dfrac{p^2}{4 x}, \ -\dfrac{p^2}{\sqrt{2} \ \sqrt{p x}} \right\}$

Out[ ]= Keskpunkt K

Out[ ]= $\left\{ \dfrac{1}{2} \left(\dfrac{p^2}{4 x} + x \right), \ \dfrac{1}{2} \left(-\dfrac{p^2}{\sqrt{2} \ \sqrt{p x}} + \sqrt{2} \ \sqrt{p x} \right) \right\}$

Out[ ]= Raadiuse pikkus

Out[ ]= $\dfrac{1}{8} \sqrt{\dfrac{(p + 2 x)^4}{x^2}}$

Out[ ]= K-s x asendatud λ-ga

Out[ ]= $\left\{ \dfrac{1}{2} \left(\dfrac{p^2}{4 \lambda} + \lambda \right), \ \dfrac{1}{2} \left(-\dfrac{p^2}{\sqrt{2} \ \sqrt{p \lambda}} + \sqrt{2} \ \sqrt{p \lambda} \right) \right\}$

Out[ ]= R-s x asendatud λ-ga

Out[ ]= $\dfrac{1}{8} \sqrt{\dfrac{(p + 2 \lambda)^4}{\lambda^2}}$

Out[ ]= $\left\{ \dfrac{1}{2} \left(\dfrac{1}{\lambda} + \lambda \right), \ \dfrac{1}{2} \left(-\dfrac{2}{\sqrt{\lambda}} + 2 \ \sqrt{\lambda} \right) \right\}$

Out[∘]= $\dfrac{1}{8}\sqrt{\dfrac{(2+2\,\lambda)^4}{\lambda^2}}$

Out[∘]=