```
rbar := t→⟨t, exp(-t), -t^2+2·t⟩
```

$$rbar := t \mapsto \langle t, e^{-t}, -t^2 + 2\,t \rangle \quad \textbf{(1)}$$

```
with(plots):
```

[*animate*, *animate3d*, *animatecurve*, *arrow*, *changecoords*, *complexplot*, *complexplot3d*, *conformal*, *conformal3d*, *contourplot*, *contourplot3d*, *coordplot*, *coordplot3d*, *densityplot*, *display*, *dualaxisplot*, *fieldplot*, *fieldplot3d*, *gradplot*, *gradplot3d*, *implicitplot*, *implicitplot3d*, *inequal*, *interactive*, *interactiveparams*, *intersectplot*, *listcontplot*, *listcontplot3d*, *listdensityplot*, *listplot*, *listplot3d*, *loglogplot*, *logplot*, *matrixplot*, *multiple*, *odeplot*, *pareto*, *plotcompare*, *pointplot*, *pointplot3d*, *polarplot*, *polygonplot*, *polygonplot3d*, *polyhedra_supported*, *polyhedraplot*, *rootlocus*, *semilogplot*, *setcolors*, *setoptions*, *setoptions3d*, *shadebetween*, *spacecurve*, *sparsematrixplot*, *surfdata*, *textplot*, *textplot3d*, *tubeplot*] **(2)**

```
with(Student[VectorCalculus])
```

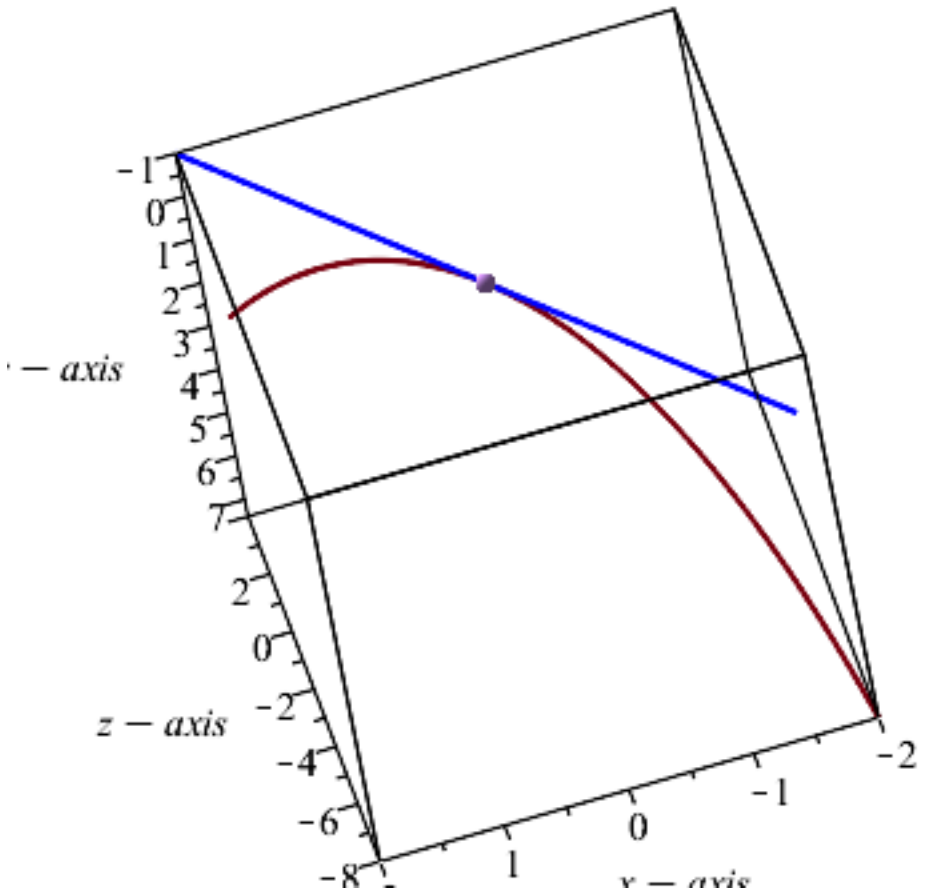
[*&x*, `*`, `+`, `-`, `.`, *<,>*, *<|>*, *About*, *ArcLength*, *BasisFormat*, *Binormal*, *ConvertVector*, *CrossProduct*, *Curl*, *Curvature*, D, *Del*, *DirectionalDiff*, *Divergence*, *DotProduct*, *FlowLine*, *Flux*, *GetCoordinates*, *GetPVDescription*, *GetRootPoint*, *GetSpace*, *Gradient*, *Hessian*, *IsPositionVector*, *IsRootedVector*, *IsVectorField*, *Jacobian*, *Laplacian*, *LineInt*, *MapToBasis*, ∇, *Norm*, *Normalize*, *PathInt*, *PlotPositionVector*, *PlotVector*, *PositionVector*, *PrincipalNormal*, *RadiusOfCurvature*, *RootedVector*, *ScalarPotential*, *SetCoordinates*, *SpaceCurve*, *SpaceCurveTutor*, *SurfaceInt*, *TNBFrame*, *TangentLine*, *TangentPlane*, *TangentVector*, *Torsion*, *Vector*, *VectorField*, *VectorFieldTutor*, *VectorPotential*, *VectorSpace*, *diff*, *evalVF*, *int*, *limit*, *series*] **(3)**

```
rbarplot := SpaceCurve(rbar(t), t=-2..2, thickness=2, axes=boxed, labels=[x-axis, y-axis, z-axis]):%:
SpaceCurve(rbar(t), t=-10..10, axes=normal, labels=[x-axis, y-axis, z-axis])
```

```
lbar := t→⟨0, 1, 0⟩ + t·⟨1, -1, 2-2·0⟩
```

$$lbar := t \mapsto \langle 0, 1, 0 \rangle + t\,\langle 1, -1, 2 + (-2 \cdot 0) \rangle \quad \textbf{(4)}$$

```
lbarplot := SpaceCurve(lbar(t), t=-2..2, thickness=2, color=blue):%:
mypoint := pointplot3d([[0, 1, 0]], symbol=solidcircle, symbolsize=20):%:
display([rbarplot, lbarplot, mypoint])
```



Graph of the curve represented parametrically by the components of the given vector.