

Practical Linear Algebra: A Geometry Toolbox, Third Edition

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Sketch Number and Filename Guide

The following tables give the filename associated with each Sketch.

Chapter 1: Descartes' Discovery

Sketch Number	Filename
Sketch 1.1	D
Sketch 1.2	gloloc
Sketch 1.3	glollocD
Sketch 1.4	boxex
Sketch 1.5	gloloc2
Sketch 1.6	airplane
Sketch 1.7	gloloc3d
Sketch 1.8	outbox
Sketch 1.9	out3D

Chapter 2: Here and There: Points and Vectors

Sketch Number	Filename
Sketch 2.1	points
Sketch 2.2	point_vector
Sketch 2.3	vectors
Sketch 2.4	manyvecs
Sketch 2.5	spaces
Sketch 2.6	parallelogram
Sketch 2.7	vecscale
Sketch 2.8	pointscale
Sketch 2.9	addpoints
Sketch 2.10	vector_lgth
Sketch 2.11	distpt
Sketch 2.12	midpt
Sketch 2.13	barycombo13
Sketch 2.14	ratios
Sketch 2.15	physical
Sketch 2.16	barycombo
Sketch 2.17	linind
Sketch 2.18	perpendicular
Sketch 2.19	generalvw
Sketch 2.20	angles

Sketch 2.21	dotprod_ex
Sketch 2.22	triineq

Chapter 3: Lining Up: 2D Lines

Sketch Number	Filename
Sketch 3.1	define_line_a
Sketch 3.2	para_line
Sketch 3.3	implicit_line
Sketch 3.4	implicit_example
Sketch 3.5	explicit_line
Sketch 3.6	twolines
Sketch 3.7	distpt2line
Sketch 3.8	closestpt2line
Sketch 3.9	implicit_para
Sketch 3.10	para_para_int
Sketch 3.11	imp_imp

Chapter 4: Changing Shapes: Linear Maps in 2D

Sketch Number	Filename
Sketch 4.1	linearmap2d
Sketch 4.2	scale
Sketch 4.3	sums
Sketch 4.4	genlincombs
Sketch 4.5	rot
Sketch 4.6	shear
Sketch 4.7	projex
Sketch 4.8	tri
Sketch 4.9	2T
Sketch 4.10	detscale
Sketch 4.11	detscale1
Sketch 4.12	leftright

Chapter 5: 2x2 Linear Systems

Sketch Number	Filename
Sketch 5.1	2x2
Sketch 5.2	cramer
Sketch 5.3	idealcase
Sketch 5.4	situation
Sketch 5.5	syshear
Sketch 5.6	switch
Sketch 5.7	lindep2
Sketch 5.8	underdet
Sketch 5.9	homsys

Sketch 5.10	changebasis
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Chapter 6: Moving Things Around: Affine Maps in 2D

Sketch Number	Filename
Sketch 6.1	skewbox
Sketch 6.2	aff2D
Sketch 6.3	newsys
Sketch 6.4	midaff
Sketch 6.5	rotpoint
Sketch 6.6	rotgenex
Sketch 6.7	reflectex
Sketch 6.8	tritri

Chapter 7: Eigen Things

No Sketches

Chapter 8: 3D Geometry

Sketch Number	Filename
Sketch 8.1	3D_pt_vec
Sketch 8.2	vector_lgth3D
Sketch 8.3	unitvecs3D
Sketch 8.4	crossp
Sketch 8.5	pgram_area
Sketch 8.6	spec_line_not
Sketch 8.7	skew_lines
Sketch 8.8	pn_plane
Sketch 8.9	pn_plane_origin
Sketch 8.10	pt_to_plane
Sketch 8.11	plane_parametric
Sketch 8.12	many_planes
Sketch 8.13	planebisector
Sketch 8.14	ppiped

Chapter 9: Linear Maps in 3D

Sketch Number	Filename
Sketch 9.1	eott
Sketch 9.2	linear3D
Sketch 9.3	reflect3D

Sketch 9.4	reflect3D1
Sketch 9.5	shear3D
Sketch 9.6	rot3D1
Sketch 9.7	rotarb
Sketch 9.8	rotex
Sketch 9.9	proj3D
Sketch 9.10	det3D

Chapter 10: Affine Maps in 3D

Sketch Number	Filename
Sketch 10.1	aff3D
Sketch 10.2	ratio3D
Sketch 10.3	centet
Sketch 10.4	mapmap
Sketch 10.5	tetet
Sketch 10.6	parallel_proj
Sketch 10.7	projlinpala
Sketch 10.8	prodownex
Sketch 10.9	perspec

Chapter 11: Interactions in 3D

Sketch Number	Filename
Sketch 11.1	pointplane
Sketch 11.2	ptplex
Sketch 11.3	ptplanenor
Sketch 11.4	2linesex
Sketch 11.5	ray_trace
Sketch 11.6	intersect
Sketch 11.7	linplaex
Sketch 11.8	triline
Sketch 11.9	reflect
Sketch 11.10	reflection
Sketch 11.11	int3plan
Sketch 11.12	3planex
Sketch 11.13	parplan
Sketch 11.14	2planes
Sketch 11.15	auxplane
Sketch 11.16	gram3d

Chapter 12: Gauss for Linear Systems

Sketch Number	Filename
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Sketch 12.1	solex
Sketch 12.2	nosol
Sketch 12.3	lsqidea

Chapter 13: Alternative System Solvers

Sketch Number	Filename
Sketch 13.1	hhreflection

Chapter 14: General Linear Spaces

Sketch Number	Filename
Sketch 14.1	gramnd

Chapter 15: Higher Eigen

No Sketches

Chapter 16: The Singular Value Decomposition

No Sketches

Chapter 17: Breaking it Up: Triangles

Sketch Number	Filename
Sketch 17.1	triangle
Sketch 17.2	barcor
Sketch 17.3	barcoex
Sketch 17.4	barcosys
Sketch 17.5	affinv
Sketch 17.6	centr
Sketch 17.7	incent
Sketch 17.8	circum1
Sketch 17.9	notri
Sketch 17.10	triuniq
Sketch 17.11	datastruct
Sketch 17.12	ncheck

Chapter 18: Putting Lines Together: Polylines and Polygons

Sketch Number	Filename
Sketch 18.1	polylines
Sketch 18.2	ie_angles
Sketch 18.3	minmaxbox
Sketch 18.4	convex_nonconvex
Sketch 18.5	rubber

Sketch 18.6	clip
Sketch 18.7	sumint
Sketch 18.8	regular_polygons
Sketch 18.9	randr
Sketch 18.10	nonsimple
Sketch 18.11	polyhole
Sketch 18.12	turn_angle
Sketch 18.13	winding
Sketch 18.14	area_convex
Sketch 18.15	area_nonc
Sketch 18.16	poly_line_inout
Sketch 18.17	nonz_wind

Chapter 19: Conics

Sketch Number	Filename
Sketch 19.1	hypencil
Sketch 19.2	ell0
Sketch 19.3	hyperbola
Sketch 19.4	parabola

Chapter 20: Curves

Sketch Number	Filename
Sketch 20.1	bez1
Sketch 20.2	decasdemo
Sketch 20.3	decas
Sketch 20.4	deriv
Sketch 20.5	seconder
Sketch 20.6	c0c1
Sketch 20.7	tangents
Sketch 20.8	slide
Sketch 20.9	frenet