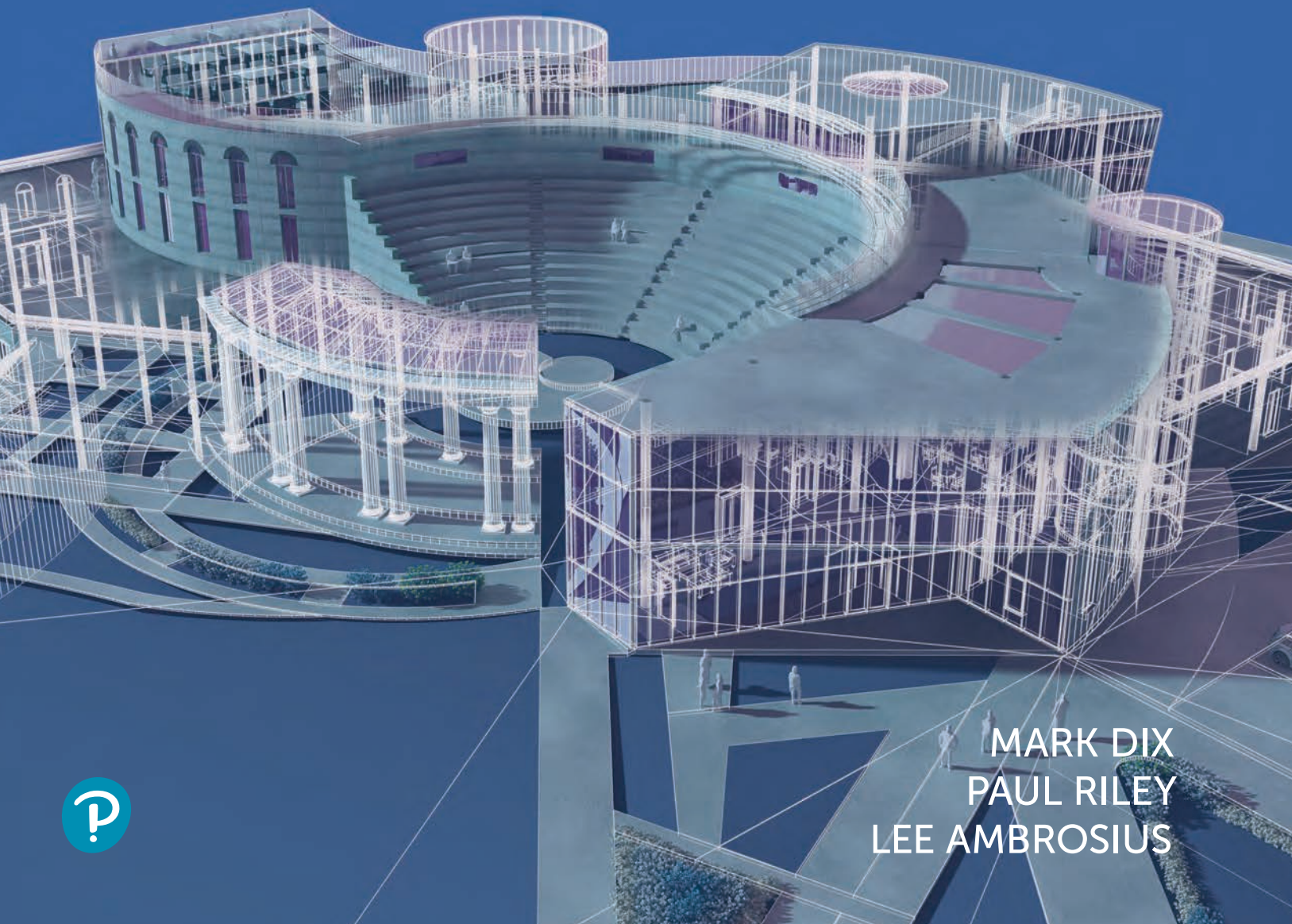


DISCOVERING **AutoCAD® 2024**



MARK DIX
PAUL RILEY
LEE AMBROSIUS

Discovering AutoCAD® 2024

Mark Dix

Paul Riley

Lee Ambrosius

Discovering AutoCAD 2024

Table of Contents

Cover

Title Page

Copyright Page

Contents

Part One: Basic Two-Dimensional Entities

Chapter 1: Lines and Essential Tools

Chapter Objectives

Introduction

Getting Started and Creating a New Drawing

Exploring the Application and Drawing Window

Interacting with the Drawing Window

Exploring Command Entry Methods

Drawing, Undoing, and Erasing Lines

Saving and Opening Your Drawings

Getting Started

Chapter Summary

Chapter Test Questions

Chapter Drawing Projects

Chapter 2: Circles and Drawing Aids

Chapter Objectives

Introduction

Changing the Grid Setting

Changing the Snap Setting

Changing Units

Drawing Circles by Specifying a Center Point and a Radius

Drawing Circles by Specifying a Center Point and a Diameter

Accessing AutoCAD Online Help Features

Using the ERASE Command

Using Single-Point Object Snap

Using the RECTANG Command

Customizing Your Workspace

Plotting or Printing a Drawing

Table of Contents

Chapter Summary

Chapter Test Questions

Chapter Drawing Projects

Chapter 3: Layers, Colors, and Linetypes

Chapter Objectives

Introduction

Creating New Layers

Assigning Colors to Layers

Assigning Linetypes

Assigning Lineweights

Changing the Current Layer

Changing Linetype Scale

Editing Corners Using FILLET

Editing Corners Using CHAMFER

Zooming and Panning with the Scroll Wheel

Using the ZOOM Command

Entering Single-Line Text

Chapter Summary

Chapter Test Questions

Chapter Drawing Projects

Chapter 4: Templates, Copies, and Arrays

Chapter Objectives

Introduction

Setting Drawing Limits

Creating a Drawing Template

Saving a Drawing Template

Using the MOVE Command

Using the COPY Command

Using the ARRAYRECT CommandRectangular Arrays

Creating Center Marks

Changing Plot Settings

Chapter Summary

Chapter Test Questions

Chapter Drawing Projects

Chapter 5: Arcs and Polar Arrays

Chapter Objectives

Introduction

Creating Polar Arrays

Table of Contents

Drawing Arcs

Using the ROTATE Command

Using Polar Tracking at Any Angle

Creating Mirror Images of Objects

Creating Page Setups

Chapter Summary

Chapter Test Questions

Chapter Drawing Projects

Chapter 6: Object Snaps and Resized Objects

Chapter Objectives

Introduction

Selecting Points with Object Snap (Single-Point Override)

Selecting Points with Running Object Snaps

Object Snap Tracking

Using the OFFSET Command (Creating Parallel Objects with OFFSET)

Shortening Objects with the TRIM Command

Extending Objects with the EXTEND Command

Using STRETCH to Alter Objects Connected to Other Objects

Measuring Objects

Creating Plot Layouts

Chapter Summary

Chapter Test Questions

Chapter Drawing Projects

Part Two: Text, Dimensions, and Other Complex Entities

Chapter 7: Text

Chapter Objectives

Introduction

Entering Single-Line Text with Justification Options

Entering Text on an Angle and Text Using Character Codes

Entering Multiline Text Using MTEXT

Editing Text in Place with TEXTEDIT

Modifying Text with the Quick Properties Palette

Using the SPELL and FIND Commands

Changing Fonts and Styles

Changing Properties with MATCHPROP

Scaling Previously Drawn Entities

Creating Tables and Fields

Table of Contents

Using Drawing Templates, Borders, and Title Blocks

Chapter Summary

Chapter Test Questions

Chapter Drawing Projects

Chapter 8: Dimensions

Chapter Objectives

Introduction

Creating and Saving a Dimension Style

Drawing Linear Dimensions

Drawing Multiple Linear Dimensions Using QDIM

Drawing Ordinate Dimensions

Drawing Angular Dimensions

Dimensioning Arcs and Circles

Annotating with Multileaders

Changing Dimension Text

Using Associative Dimensions

Using the HATCH Command

Scaling Dimensions Between Paper Space and Model Space

Chapter Summary

Chapter Test Questions

Chapter Drawing Projects

Chapter 9: Polylines

Chapter Objectives

Introduction

Drawing Polygons

Drawing Donuts

Using the FILL Command

Drawing Straight Polyline Segments

Drawing Polyline Arc Segments

Editing Polylines with PEDIT

Drawing Splines

Creating Path Arrays

Drawing Revision Clouds

Drawing Points

Using Constraint Parameters

Using AutoConstrain and Inferred Constraints

Chapter Summary

Chapter Test Questions

Table of Contents

Chapter Drawing Projects

Chapter 10: Blocks, Attributes, and External References

Chapter Objectives

Introduction

Creating Groups

Creating Blocks

Inserting Blocks into the Current Drawing

Creating Dynamic Blocks

Adding Constraints to Dynamic Blocks

Accessing Data in a Block Table

Using the Windows Clipboard

Inserting Blocks and External References into Other Drawings

Using AutoCAD DesignCenter

Defining Attributes

Working with External References

Extracting Data from Attributes

Counting Blocks

Replacing Blocks

Creating Tool Palettes

Exploding Blocks

Chapter Summary

Chapter Test Questions

Chapter Drawing Projects

Part Three: Isometric Drawing and Three-Dimensional Modeling

Chapter 11: Isometric Drawing

Chapter Objectives

Introduction

Using Isometric Snap

Switching Isometric Planes

Using COPY and Other Edit Commands

Drawing Isometric Circles with ELLIPSE

Drawing Text Aligned with Isometric Planes

Drawing Ellipses in Orthographic Views

Saving and Restoring Displays with VIEW

Chapter Summary

Chapter Test Questions

Chapter Drawing Projects

Table of Contents

Chapter 12: 3D Modeling

Chapter Objectives

Introduction

Creating and Viewing a 3D Wireframe Box

Defining User Coordinate Systems

Exploring the 3D Basics Workspace

Creating Solid Boxes and Wedges

Accessing Different Visual Styles

Creating the Union of Two Solids

Working with DUCS

Creating Composite Solids with SUBTRACT

Creating Chamfers and Fillets on Solid Objects

Practicing 3D Gizmo Editing

Rendering 3D Models

Changing Viewpoints with the ViewCube

Creating Layouts with Multiple Views

Chapter Summary

Chapter Test Questions

Chapter Drawing Projects

Chapter 13: More Modeling Techniques and Commands

Chapter Objectives

Introduction

Drawing Polysolids

Drawing Cones

Drawing Pyramids

Drawing Torus

Slicing and Sectioning Solids

Mesh Modeling

Adjusting Viewpoints with 3DORBIT

Creating 3D Solids from 2D Outlines

Walking Through a 3D Landscape

Creating an Animated Walk-Through

Chapter Summary

Chapter Test Questions

Drawing Problems

Chapter Drawing Projects

Appendix A: Drawing Projects

Table of Contents

Appendix B: Creating Custom Ribbon Panels

Creating a Customized Ribbon Panel

Creating Customized Tools

Appendix C: Menus, Macros, and the CUI Dialog Box

The CUI Dialog Box

Characters Used in Menus and Macros

Index

Appendix D and Glossary are available online

atpeachpit.com/Discoverautocad2024.

Appendix D: Additional Tools for Collaboration

Glossary

A

B

C

D

E

F

G

H

I

L

M

N

O

P

Q

R

S

T

V

W

X