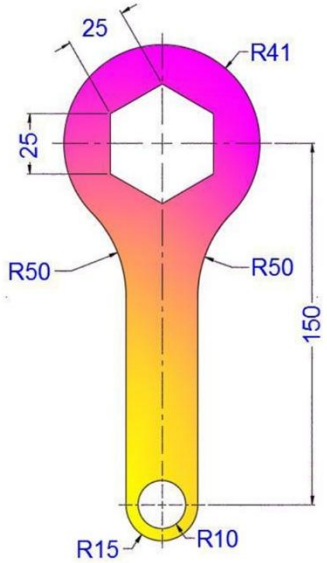
AUTODESK

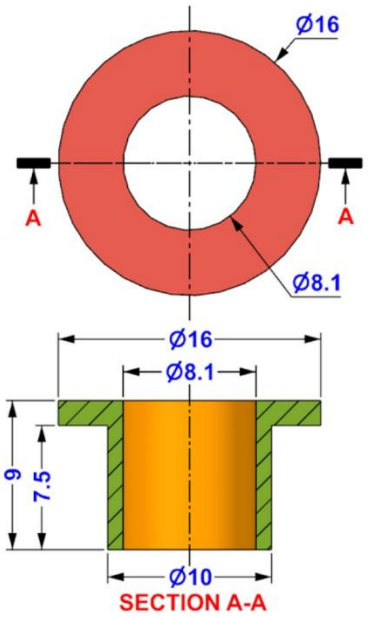
FUSION 360 ALL IN ONE WORKBOOK

500+ PRACTICE EXERCISES

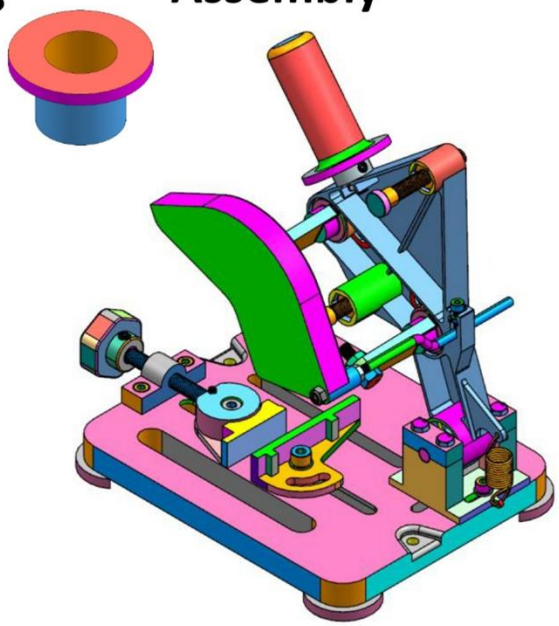
- Sketching
- 3D Modeling
- Assembly



2D Sketching



3D Modeling



Assembly

SACHIDANAND JHA

AUTODESK

FUSION 360 ALL IN ONE WORKBOOK

500+ PRACTICE EXERCISES

2D Sketching • 3D Modeling • Assembly Drawings

SACHIDANAND JHA

Dear Reader,

Thank you for choosing the AUTODESK FUSION 360 ALL IN ONE WORKBOOK. This book is part of the CADIN360° learning series, created to help engineers, students, and professionals master Fusion 360 through structured and practical exercises.

This book contains over 500 carefully crafted practice drawings, including:

- 200 2D Sketching Exercises
- 200 3D Modeling Exercises
- Comprehensive Assembly Models with 150+ Individual Part Drawings

We founded CADIN360 in 2016 with the goal of delivering practical, high-quality learning material for CAD software. More than 9 years later, we're still committed to producing consistently exceptional books. With each of our titles, we're working hard to set a new standard for the industry. From the paper we print on, to the authors we work with, our goal is to bring you the best books available.

I hope you see all that reflected in these pages. I'd be very interested to hear your comments and get your feedback on how we're doing. Feel free to let me know what you think about this or any other CADIN360 book by sending me an email at cadin360@gmail.com

If you think you've found a technical error in this book, please visit https://cadin360.com/contact-us/.
Customer feedback is critical to our efforts at CADIN360.

Best regards,

Sachidanand Jha
Founder & CEO, CADIN360

AUTODESK FUSION 360 ALL IN ONE WORKBOOK

Published by CADIN360
Website: cadin360.com

Limit of Liability/Disclaimer of Warranty:

The publisher and the author make no representations or warranties with respect to the accuracy or completeness of the contents of this work and specifically disclaim all warranties, including without limitation warranties of fitness for a particular purpose. No warranty may be created or extended by sales or promotional materials. The advice and strategies contained herein may not be suitable for every situation. This work is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional services. If professional assistance is required, the services of a competent professional person should be sought. Neither the publisher nor the author shall be liable for damages arising herefrom. The fact that an organization or Web site is referred to in this work as a citation and/or a potential source of further information does not mean that the author or the publisher endorses the information the organization or Web site may provide or recommendations it may make. Further, readers should be aware that Internet Web sites listed in this work may have changed or disappeared between when this work was written and when it is read.

Examination Copies

Books received as examination copies in any form such as paperback and eBook are for review only and may not be made available for the use of the student. These files may not be transferred to any other party. Resale of examination copies is prohibited

Electronic Files & Usage Rights:

The electronic file/eBook in any form of this book is licensed to the original user only and may not be shared, distributed, resale or transferred to any other party. To access files, the user must contact **cadin360@gmail.com** with valid proof of purchase. Unauthorized distribution of the files is a violation of copyright law.

Disclaimer:

All product names, logos, brands, and registered trademarks mentioned in this publication are the property of their respective owners and are used for identification purposes only.

AUTODESK FUSION 360 ALL IN ONE WORKBOOK

- This book contains over 500 CAD practice exercises, organized as:

  1. 200 2D Sketching Exercises
  2. 200 3D Modeling Exercises
  3. Assembly Projects with 150+ Part Drawings

- This book is a practice workbook. It does not include step-by-step tutorials for creating 2D drawing, 3D models and Assembly.

- SI units (millimeters) are used for all dimensions.

- Third Angle Projection is used throughout this book.

- This book is for **AUTODESK FUSION 360** and also suitable for Other Feature-Based Modeling Software such as Inventor, Catia, SolidWorks, NX, Solid Edge, AutoCAD, PTC Creo etc.

- Designed for students, engineers, drafters, and designers looking for extensive CAD practice using Autodesk Fusion 360.

- The exercises cover a wide range of real-world modeling challenges—from simple sketches to complex assemblies—offering clear, concise, and structured drawing practice.

- Exercises are organized to gradually develop beginner to advanced-level design skills.

- Each exercise is self-contained, and can be completed independently.

- Assembly drawings follow industry standards to help improve visualization and multi-part modeling skills.

- All dimensions are in mm. Assume missing dimensions logically.

HOW TO USE THIS BOOK

This book contains over 500 CAD practice exercises, designed for self-paced learning using Autodesk Fusion 360 or any feature-based modeling software.

- 2D Sketching Exercises: Start here if you're a beginner or learning how to use the sketch environment.

- 3D Modeling Exercises: Follow after mastering sketching. Practice creating solid models using the provided dimensions.

- Assembly Drawings: Use after completing part models to understand multi-part assemblies, relationships, and constraints.

Tips for Best Use:

- Complete the exercises in order, or jump to any skill level you prefer.
- All dimensions are in millimeters.
- Where dimensions are missing, apply logic or practice estimation.
- This book is ideal for both students and professionals preparing for industry design work.

Note:

This book is available in multiple formats – **Black & White**, **Standard Color**, and **Premium Color** editions.

Happy learning!
– Team CADIN360

MASTER FUSION 360: UNLOCKING XY, XZ & YZ PLANE SKETCHING SECRETS

• LEARN • • APPLY • • GROW •

Introduction

In Fusion 360, sketching is an essential skill for creating 2D profiles, 3D models, and assemblies. Understanding the different planes in Fusion 360 is crucial for creating accurate and efficient sketches. The X-Y, X-Z, and Y-Z planes are three fundamental planes that serve as the foundation for sketching in Fusion 360. In this article, we will explore the differences between these three planes and provide practical examples to help you master sketching in Fusion 360.

Understanding the X-Y Plane

The X-Y plane is one of the three primary planes in Fusion 360. It is the default plane when creating a new sketch, and it serves as the base plane for most sketches. The X-Y plane is defined by the X-axis and Y-axis, which are perpendicular to each other. When sketching in the X-Y plane, you can create profiles that have a width and depth, but no height.

Creating a Rectangular Profile in the X-Y Plane

To create a rectangular profile in the X-Y plane, follow these steps:

1. Open a new sketch in Fusion 360.
2. Click on the "Sketch" tab and select the "Rectangular" tool from the 2D sketching tools.
3. Draw a rectangle by specifying the width and depth of the profile.
4. The resulting rectangle will be a profile with a width and depth, but no height.

Understanding the X-Z Plane

The X-Z plane is another fundamental plane in Fusion 360. It is defined by the X-axis and Z-axis, which are perpendicular to each other. When sketching in the X-Z plane, you can create profiles that have a depth and height, but no width.

Creating a Circular Profile in the X-Z Plane

To create a circular profile in the X-Z plane, follow these steps:

1. Open a new sketch in Fusion 360.
2. Click on the "Sketch" tab and select the "Circle" tool from the 2D sketching tools.
3. Draw a circle by specifying the radius of the profile.
4. The resulting circle will be a profile with a depth and height, but no width.

Understanding the Y-Z Plane

The Y-Z plane is the third fundamental plane in Fusion 360. It is defined by the Y-axis and Z-axis, which are perpendicular to each other. When sketching in the Y-Z plane, you can create profiles that have a height and width, but no depth.

Creating a Trapezoidal Profile in the Y-Z Plane

To create a trapezoidal profile in the Y-Z plane, follow these steps:

1. Open a new sketch in Fusion 360.
2. Click on the "Sketch" tab and select the "Trapezoid" tool from the 2D sketching tools.
3. Draw a trapezoid by specifying the width and height of the profile.
4. The resulting trapezoid will be a profile with a height and width, but no depth.

Practical Applications

Understanding the differences between the X-Y, X-Z, and Y-Z planes is crucial for creating accurate and efficient sketches in Fusion 360. Here are some practical applications of each plane:

- The X-Y plane is ideal for creating flat profiles, such as a rectangular plate or a flat sheet metal part.
- The X-Z plane is ideal for creating profiles with a depth, such as a cylindrical shape or a conical shape.
- The Y-Z plane is ideal for creating profiles with a height, such as a column or a beam.

Conclusion

In conclusion, understanding the differences between the X-Y, X-Z, and Y-Z planes is essential for creating accurate and efficient sketches in Fusion 360. By mastering the use of these planes, you can create a wide range of profiles and shapes that are critical for creating 3D models and assemblies. With practice and patience, you can become proficient in sketching in Fusion 360 and unlock the full potential of this powerful CAD software.

FAQ

Q: What is the default plane in Fusion 360?

A: The X-Y plane is the default plane in Fusion 360.

Q: How do I create a profile in the X-Z plane?

A: To create a profile in the X-Z plane, select the "Sketch" tab and choose the "Plane" tool from the 2D sketching tools. Then, select the X-Z plane as the active plane and begin sketching.

Q: What is the difference between a profile and a sketch?

A: A profile is a 2D sketch that represents the shape of a part or an assembly. A sketch is the underlying geometry that makes up a profile.

Q: How do I switch between planes in Fusion 360?

A: To switch between planes in Fusion 360, select the "Sketch" tab and choose the "Plane" tool from the 2D sketching tools. Then, select the desired plane as the active plane.

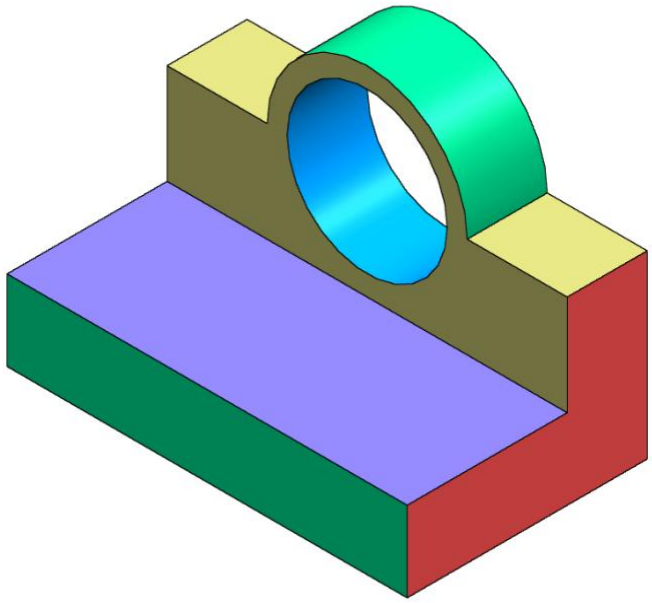
Q: Can I create a profile in multiple planes at once?

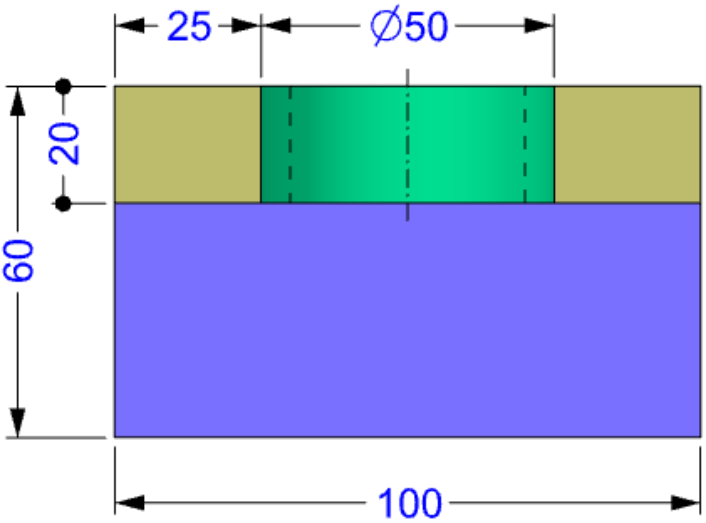
A: Yes, you can create a profile in multiple planes at once by using the "Plane Merge" tool. This tool allows you to merge multiple planes into a single profile.

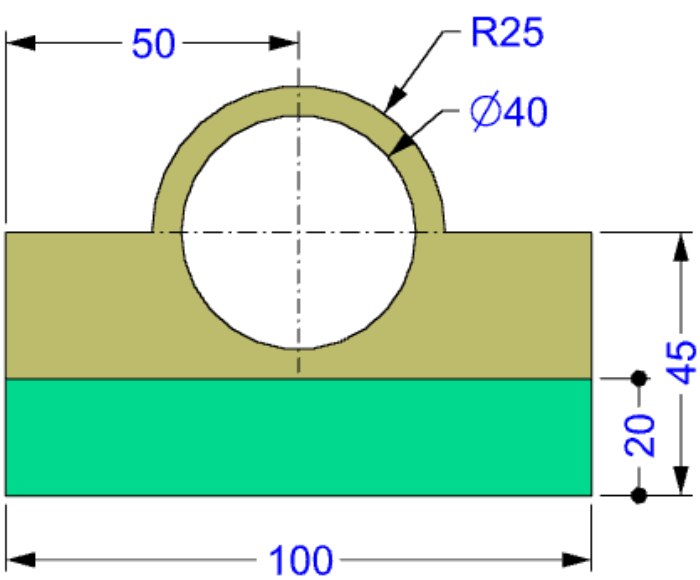
Q: What is the significance of the X-Y, X-Z, and Y-Z planes in Fusion 360?

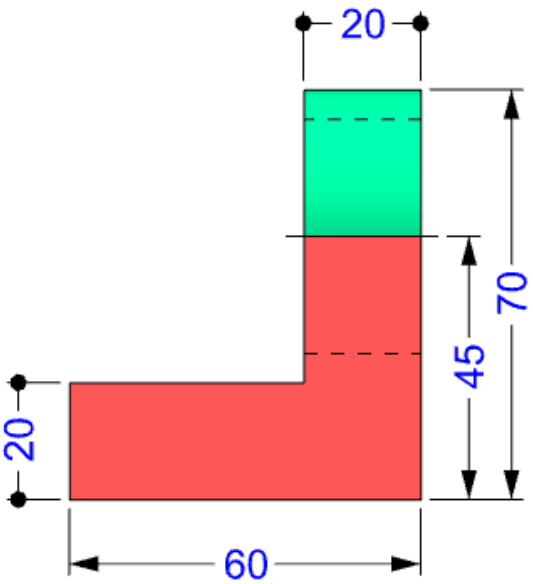
A: The X-Y, X-Z, and Y-Z planes are the fundamental planes in Fusion 360 that serve as the foundation for sketching. Understanding the differences between these planes is crucial for creating accurate and efficient sketches.

EXERCISE-03









Get The Complete Practice Sample

You downloaded a single Exercise PDF

The complete practice sample for this software includes multiple exercises and is not available inside this PDF..

What you will receive

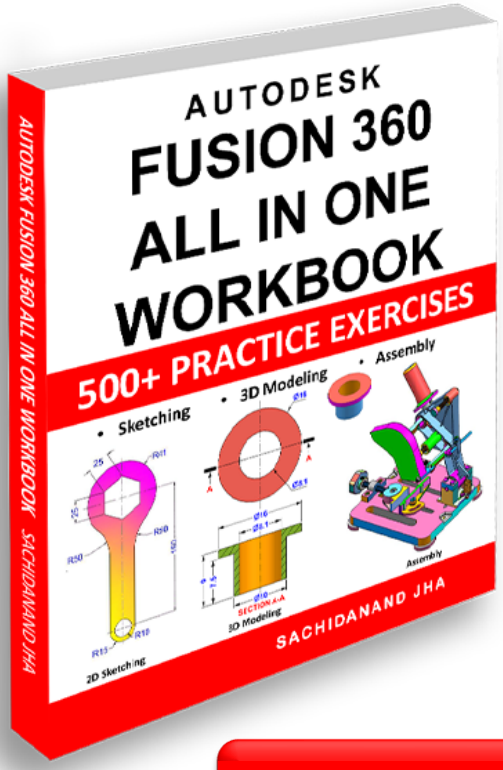
- A software-specific complete sample PDF
- Multiple real practice exercises (not a single file)
- Same quality as our professional training material
- Compatible with the latest software version

How to get the complete sample

Click the button below and **enter a valid email address**.
The **complete sample PDF will be delivered automatically** after the form is submitted.

SEND THE COMPLETE SAMPLE TO MY EMAIL

END OF SAMPLE



What's Included in the FUSION 360 ALL IN ONE WORKBOOK?

- ✓ Books contains exercises of Sketching, 3D Modeling & Assembly.
- ✓ 500+ Practice Exercises with Dimensions
- ✓ Full Assembly STEP Files (.stp format) – Compatible with all major CAD software
- ✓ Get 200 3D Exercises in .f3d file format
- ✓ Get All Assembly Exercises in .STP file
- ✓ Instant Download Link - Sent to Your Email After Payment
- ✓ Lifetime Access to All Files

Get the Paperback book on Amazon

Get the Complete Bundle for Only $27.99

Special Offer for Students & Learners

Are you a Student, Unemployed or Financially struggling ?
Get this special Bundle only for $19.99

Special Offer for Only $19.99

🙏 Thank You for Learning with Us!

Thank you for choosing the **AutoDesk Fusion 360 ALL IN ONE WORKBOOK**. We hope this book helped you strengthen your Fusion 360 skills through hands-on practice and real-world design challenges.
Your feedback means the world to us!
If you found this book helpful, please take a moment to leave a **review** on the Amazon where you purchased it. Your kind words not only motivate us but also help other learners discover our resources. Scan the QR.

⭐ A good review goes a long way!

📘 **Explore More CAD Practice Books**
Looking to continue your learning journey?
We offer similar practice-based books for over **30 CAD software platforms**, including:

- AutoCAD
- SolidWorks
- FreeCAD
- TinkerCAD
- TurboCAD
- Siemens NX
- CATIA
- Creo
- SketchUp and many more...

Visit our website 👉 www.cadin360.com to browse the complete collection.

💬 **Stay Connected**
Have suggestions, feedback, or just want to say hello?
We'd love to hear from you!
📧 Email: cadin360@gmail.com
🌐 Website: www.cadin360.com

🚀 **Keep Practicing. Keep Designing.**
Whether you're a beginner or a pro, **practice is the key** to mastering any CAD software.
We're honored to be a part of your journey.
Happy Designing!
– Team **Cadin360**

Master Fusion 360 with Real-World Practice Exercises

This book contains over 500 Fusion 360 practice exercises including sketching, 3D modeling, and assembly drawings. Designed for students, engineers, and professionals to build practical CAD modeling skills.

AUTODESK FUSION 360 ALL IN ONE WORKBOOK

This book contains:-

- 200 2D Sketching Exercises
- 200 3D Modeling Exercises
- Multi-part Assembly Exercises & Detailed Drawings
- All drawings in 3rd Angle projection
- All dimensions are in mm(metric system)