Tips And Tricks To Prep For The CSWP Exam

- Avelino Rochino, DS SolidWorks Certification

Who I am...

- Avelino Rochino, Certification Specialist
- Member of the SW Product Definition Team for 4.5 years before joining Certification
- Specialized in defining Sheet Metal, Weldments, Routing, and Core Functionality

SolidWorks **Associate** Certifications

- Core exam:
  - CSWA : Certified SolidWorks Associate
- Advanced Topic Exams:
  - CSDA: Certified Sustainability Design Associate

SolidWorks **Professional** Certifications

- Core exam:
  - CSWP: Certified SOLIDWORKS Professional
- Certified SOLIDWORKS Professional Advanced (CSWPA) Exams:
  - Sheet Metal (SM)
  - Surfacing (SU)
  - Mold Tools (MT)
  - Weldments (WD)
  - Drawing Tools (DT)

SolidWorks **Expert** Certification

- CSWE: Certified SOLIDWORKS Expert
- Pre-requirements:
  - CSWP Exam
  - 4 of 5 Advanced CSWP Exams

Simulation Certification Products

- Certified SOLIDWORKS Associate - Simulation (CSWA-S)
- Certified SOLIDWORKS Professional - Simulation (CSWP-S)
- Advanced Simulation and Expert Simulation exams to come later in 2015

EPDM Professional Certification

- Administrator exam:
  - CEPA: Certified Enterprise PDM Administrator

SOLIDWORKS Certification Program

- Why get certified?
  - Professional development
    - Management goals
    - Team member bragging rights
    - Real goals for salary adjustment
  - Job seeking
- Why now?
  - Full time access to SolidWorks
  - Height of SolidWorks knowledge

Real letter from unemployed user #1

Avelino,

Firstly, thank you for the speedy response.

My situation is one of working for many years as a design engineer utilizing SolidWorks (since '99) and always too busy to concern myself with certification. Now though, I've relocated to an area of California where manufacturing jobs are fewer and further between and now, I feel it imperative to leverage additional tools to boost my skill set and resume. 10 years at my last place of employment and was telecommuting for a year before they had to let me go due to slow business.

Any help would be of great help to me. I'll take whatever you can offer to help get me back to work and a productive SolidWorks user once again.

Regards,

Real letter from unemployed user #2

Hi admin,

I am R*** *****, a Mechanical Design Engineer. I have 3 years of experience using SOLIDWORKS (SW2010, SW 2012, SW2014) at the University and my workplace. Currently, I am unemployed and I have no SOLIDWORKS software and subscriptions at my own computer. I am interested with CSWA and CSWP certification program. Can you help me how can I can take the exams without purchasing the software?

CSWP: Certified SOLIDWORKS Professional

- CSWP Background
- Cheater's Guide: Preview and hints for each segment of the exam
- CSWA/CSWP coupons…

A little history…

- Third generation of the CSWP Core exam.
  - Second generation on-line CSWP exam.
  - Very first CSWP test was proctored and had to be taken at a testing center
- Recommended for the experienced user.
  - Roughly ***at least*** 6 months full-time experience is recommended before taking this exam.

What do I need to take my CSWP? (H/W and S/W)

Required:

- Connection to the Internet
- VirtualTester Client
- SolidWorks 2008 or later
  - Commercial or Student Edition license

Optional:

- Dual monitors

CSWP Core Exam Features

- Test are taken in three segments
  - Three segments varying from 40 to 90 mins.
  - Once a segment is passed user never has to repeat that segment
  - User can take segments in any order and at any time
  - Once all three segments are passed user automatically receives CSWP certificate
- Many questions have downloaded models
  - Must use SolidWorks 2008 or later to open files
  - Varying downloads reduce ability to cheat
  - **NEVER EVER** modify the downloaded files in any way unless instructed to do so.
- Mixture of multiple choice and fill-in questions reduce progressive errors

Inside the CSWP-Core Exam

- **Recommended Training Courses:**
  - SolidWorks Essentials
  - Advanced Part Modeling
  - Advanced Assembly Modeling
- **Recommended SolidWorks Version:** SolidWorks 2008 and later
- **Exam Length:** Three Segments, Total 210 minutes
- **Minimum Passing grade for each segment:** 75%
- All candidates receive electronic certificates, business card logos and optional personal listing on the CSWP directory when they pass.

Testing Client

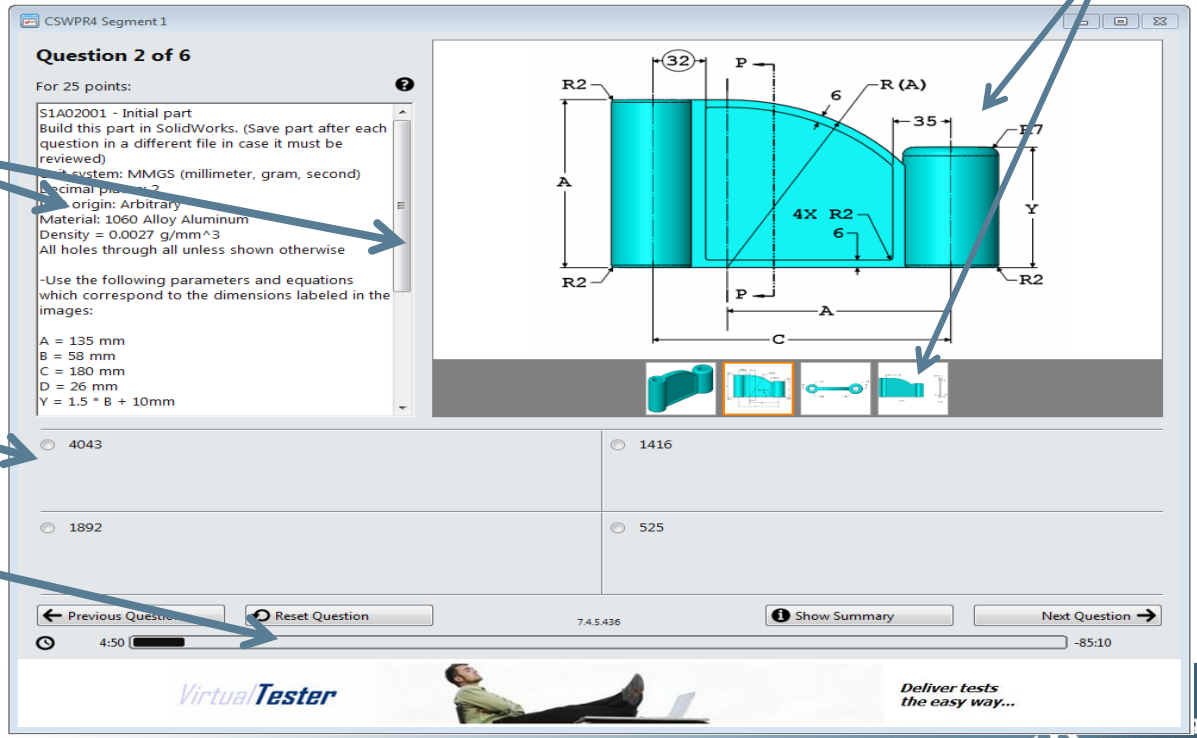
- **Test** runs in its own client outside of SolidWorks:

Drawings and Images

Detailed instructions with scrolling control

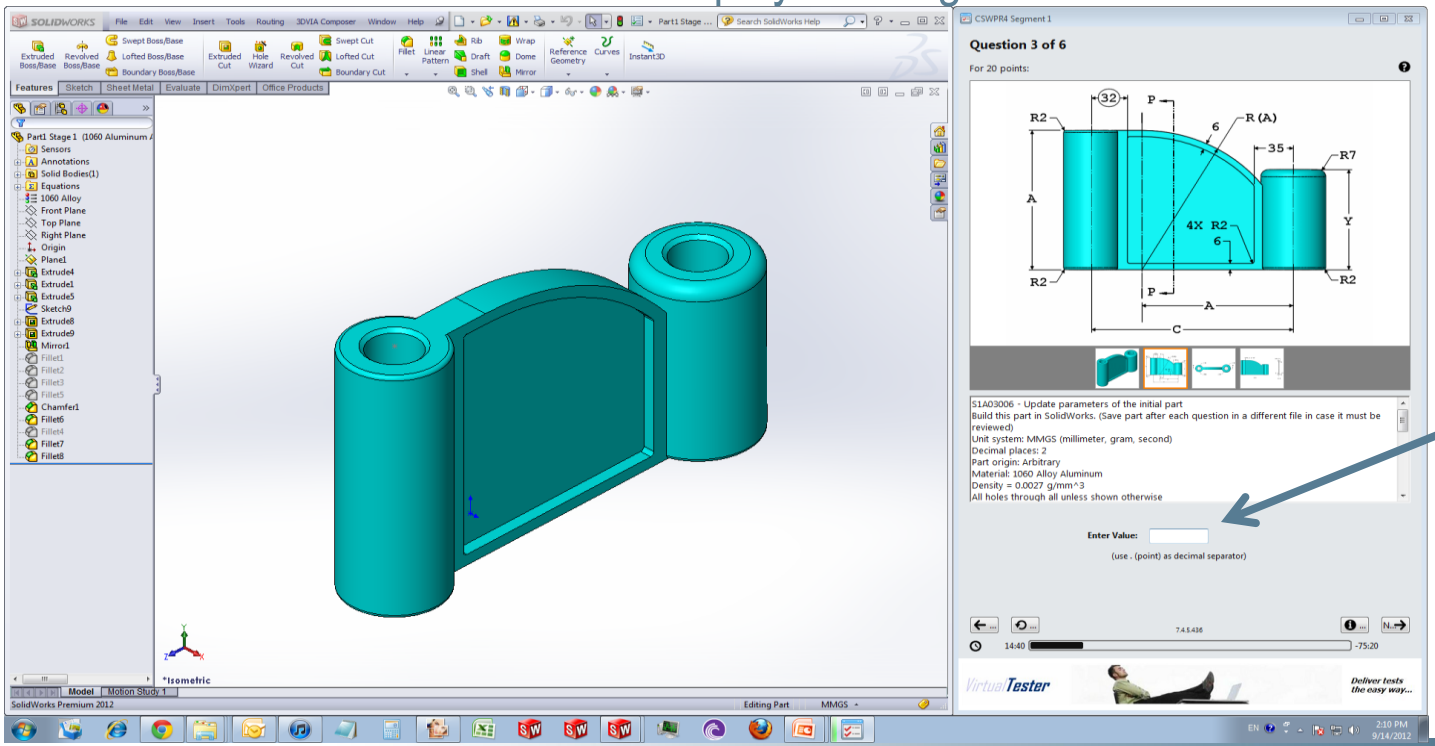
Multiple choice

Timer



Testing Client

- Client can be re-sized to be displayed alongside SW:



Testing Client

- Best to use dual monitors set-up

- If dual monitors aren't available re-size Client so it's displayed alongside SW:
  - In SolidWorks go to Help > Tutorials to automatically resize SW screen (or you can simply drag corner of SW window)
  - Adjust Client by dragging corners so it fits next to reduced SW screen

CSWP Exam: Segment 1

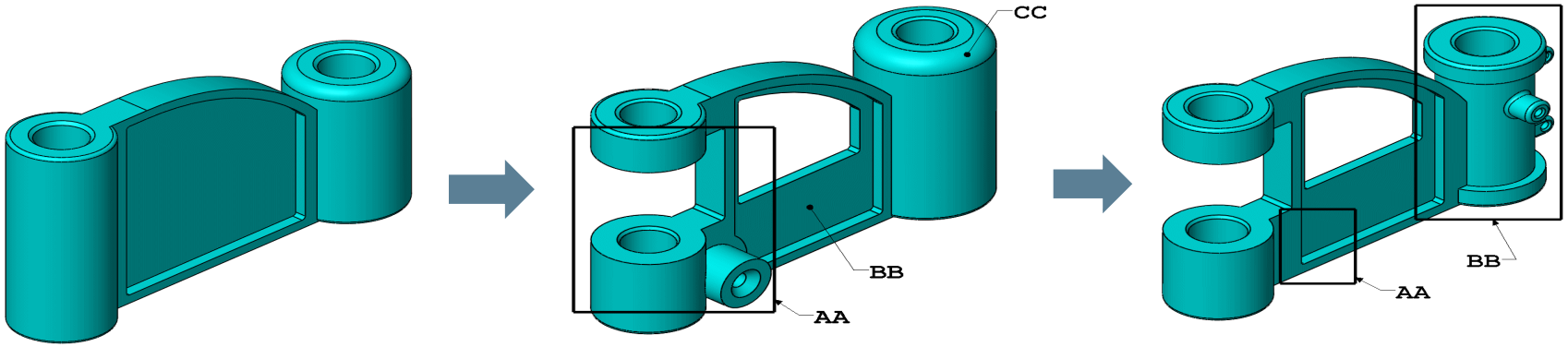
Segment 1 (90 Minutes)

- Create a part from scratch
- Use dimension links and equations to aid in modeling
- Use of equations to relate dimensions
- Update of parameters and dimension sizes
- Mass property analysis
- Modification of geometry on initial part to create a more complex part

What it covers…

Segment 1 (90 Minutes)

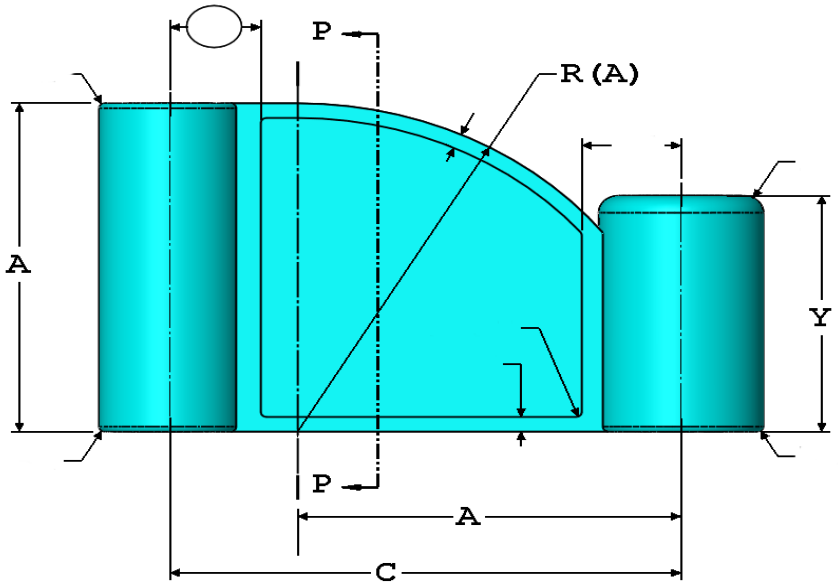
- Transform a solid and manage its parameters



Stage 1 **Stage 2** **Stage 3**

- At Stage 1 and Stage 3 you will be asked to make simple parametric changes
- Part MUST be robust and easy to modify parametrically.
- **Hint: Preview the changes to be made before starting to model**

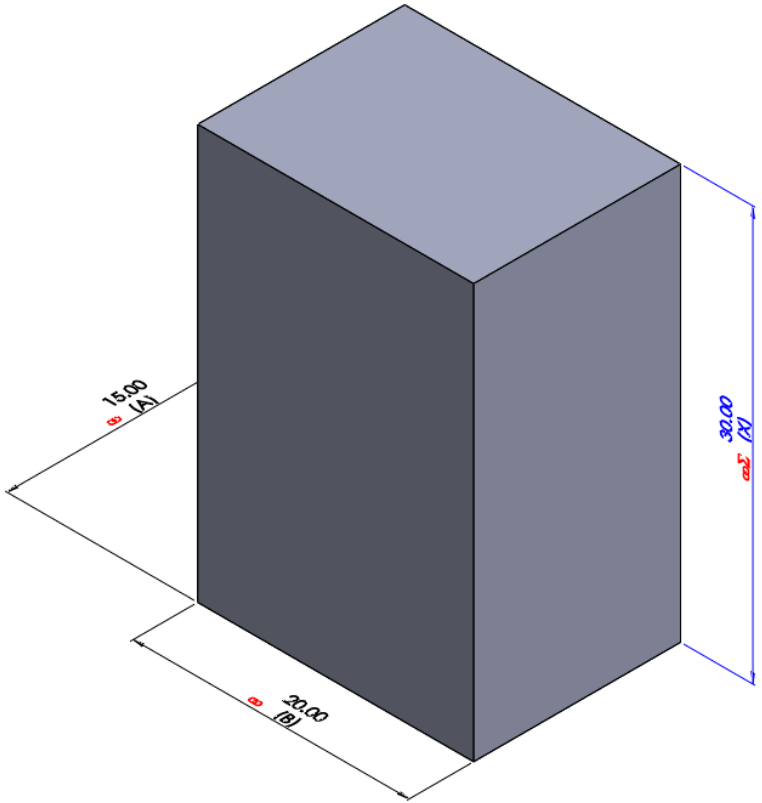
Segment 1 Hints



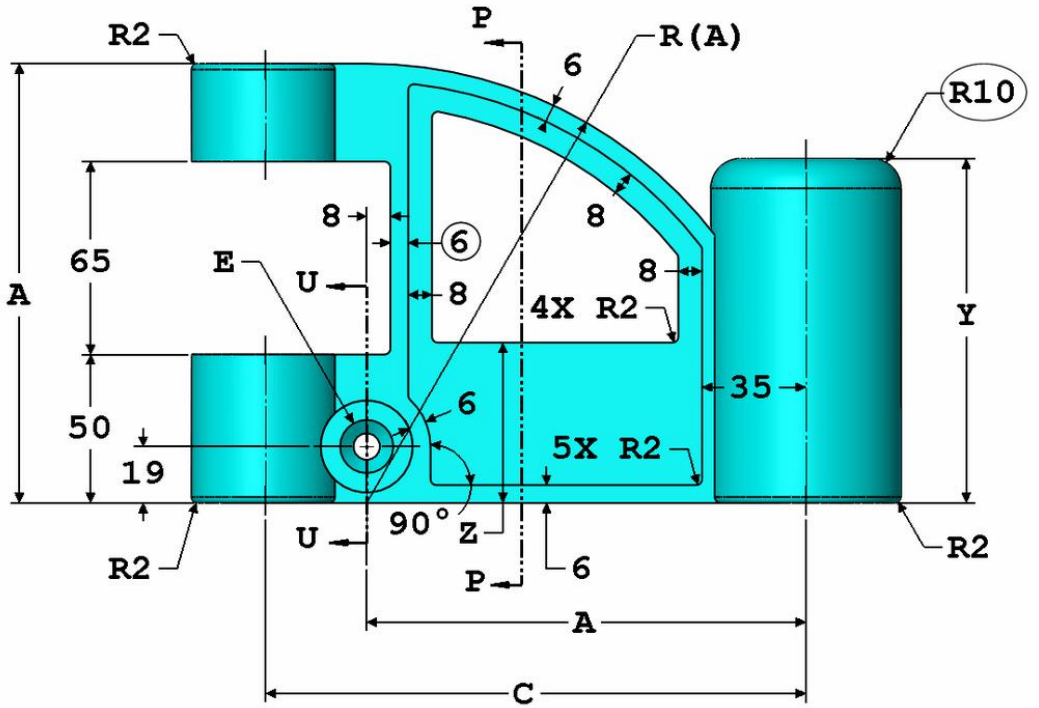
- **Practice Linked Dimensions and Equations**
- Linked dimensions will make parameter modification much easier for Seg 1
- Linked dimensions and equations automatically organizes the model
- Menu *View* > *Dimension names* to show linked names to make identifying and changing parameters much easier

Segment 1 Hints

- Simple Example of Linked Dimensions
  - A = 10
  - B = 12
  - X = 2 * A
- Practice this technique to control related dimensions in your parts



Segment 1 Hints



- Dimensioning is not to any standard for manufacturing.
- Dimensions are **Model Items** that show **Design Intent** for the underlying sketch
- Use the dimensions to create sketches that will update as expected

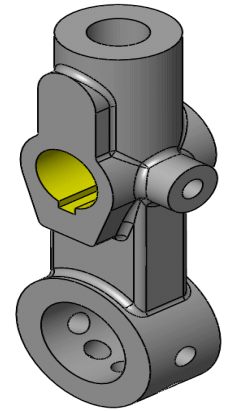
Segment 1 Hints

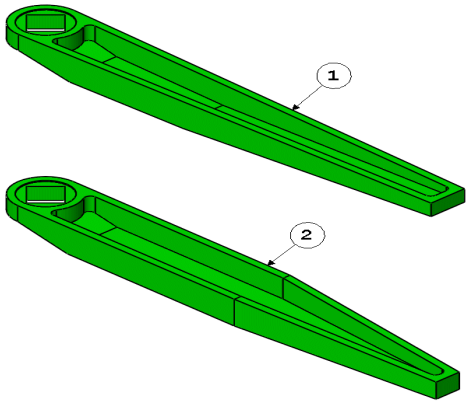
- For each Stage during test there is a Multiple Choice question…make sure answer is among choices available
- Do CSWP Practice exam at www.solidworks.com/cswp (click on CSWP link on left, then Practice Exam link on right of page)

What it covers…

Segment 2 (40 Minutes)

- Creating configurations from other configurations
- Changing configurations
- Design Table creation and modification
- Changing features of a part that is given to you





Segment 2 Hints

Part 1: Configurations and Design Table

- Practice dimension modification across Configs
- Practice feature suppression across Configs
- Create a new configuration based on another configuration
- Practice creating a Design Table (DT) and adding a configuration using DT

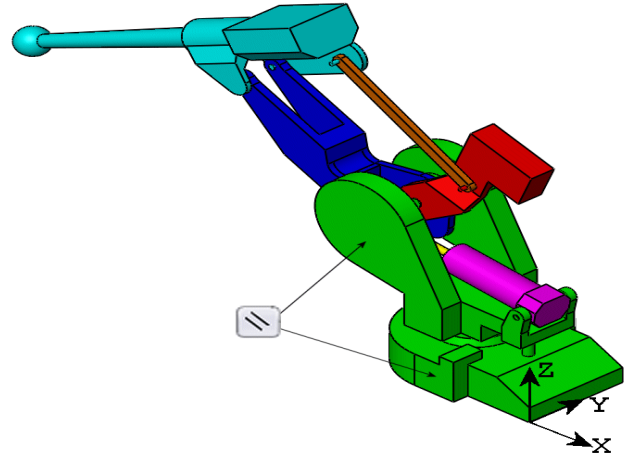
Part 2: Modifying history of an existing part

- Before modifying anything, step through Feature history one feature at a time
- Recognize where key features are such as Shells or Extrude-Cuts so that any changes will contain proper shapes afterwards

What it covers…

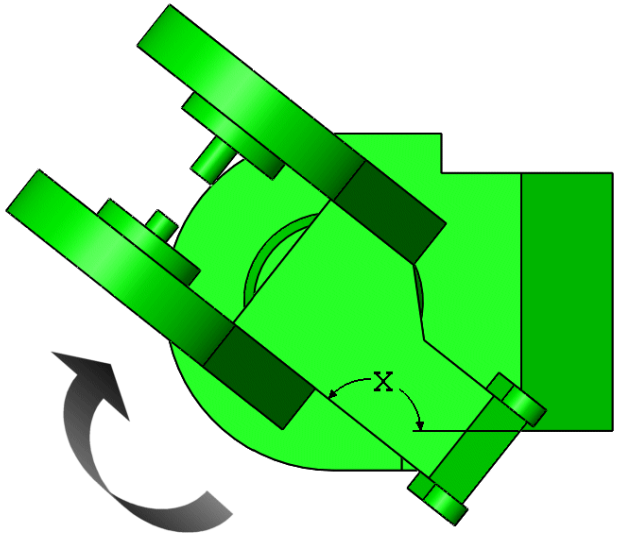
Segment 3 (80 Minutes)

- Mates
- Creating an assembly
- Adding parts to an assembly
- Moving parts with collision detection
- Replacing a part with another part in the assembly
- Creating a coordinate system
- Using a coordinate system to do mass properties analysis
- Flexible assemblies



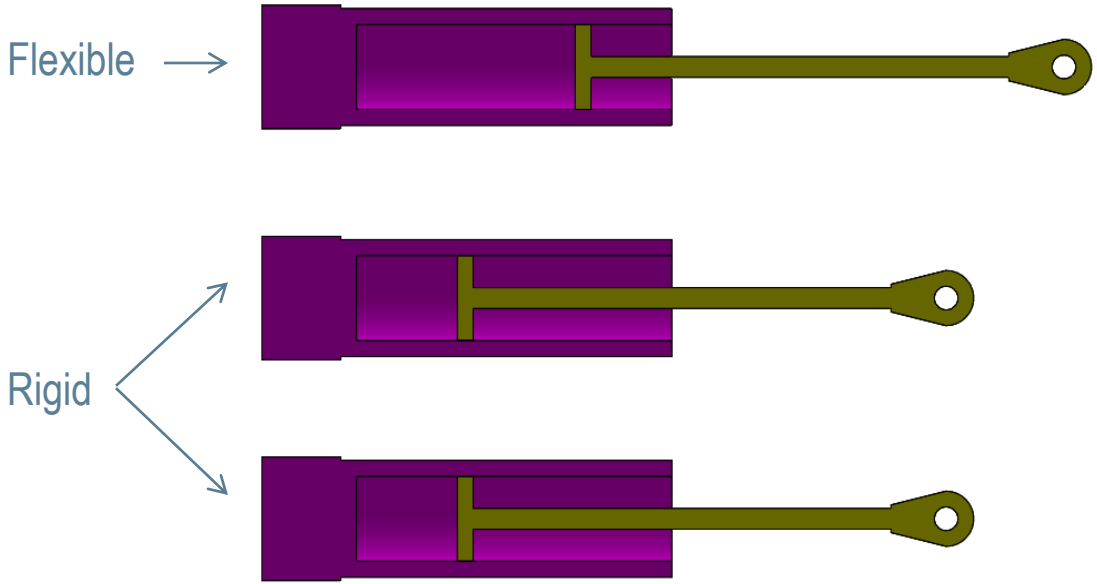
Be careful of simple errors

- For example, you are asked to measure this angle. How do you do it and how do you understand the output from SOLIDWORKS



Flexible Assemblies

- Changing an assembly to Flexible allows it to behave independently of its source assembly



Segment 3 Hints

Assembly Functionality:

- Practice all the Standard and Advanced Mates
- Collision Detection - Move Component command
- Flexible Assemblies - Practice how to make an assembly Flexible or Fixed
- Practice how to completely replace an existing part in an assembly

Multiple Choice and Fill-in-the-blank Questions:

- Each problem set consists of a design that is progressively built or modified with fill in the blank and multiple choice questions.
- Multiple choice questions allow the user to see where he may be “off track”.
- *If your answer isn’t one of the multiple choice answers, then you messed up something in between that question and the previous multiple choice question (usually two or three questions back).*

Questions?

Email me if you need more information:

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- www.solidworks.com/certification