

# CHECKSHEET FOR REVOLVE & PATTERN FEATURES (HW9)

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NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SECTION #: \_\_\_\_\_

**Part A. Pre-CAD Plan**

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\_\_\_ Bulleted lists of feature creation steps and assumptions (i.e., size and/or location of non-specified features, etc.)

\_\_\_ Identification of 2D sketches and thoughtful choice/selection of sketch planes

\_\_\_ Identification of origin, x-y-z axes, and details about patterned features (feature, axis, and number of instances)

\_\_\_ Identification of key relations and associated construction geometry

**Above and Beyond (Exemplary)**

\_\_\_ Exceptional organization and neatness

\_\_\_ Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part B. Process Documentation**

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\_\_\_ Illustration & clear/concise discussion of sketches and pattern features (including relations, reference geometry, and order of implementation) (2 pts)

\_\_\_ Annotated design tree showing fully-defined sketches

\_\_\_ Lessons learned (at least three with substantive explanation)

**Above and Beyond (Exemplary)**

\_\_\_ Exceptional organization and neatness

\_\_\_ Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part C. Final Products** (based on finished model and design configurations)

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\_\_\_ Accurate/attractive solid model

\_\_\_ Illustration of global variables and equations used (at least 2 global variables and 2 equations)

\_\_\_ Illustration of design table and each configuration (at least 3) (2 pts)

**Above and Beyond (Exemplary)**

\_\_\_ Exceptional organization and neatness

\_\_\_ Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Point Deductions

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# PRE-CAD PLAN

**Initial Assumptions:**

**Bulleted Feature Creation Steps (Ex: 1. Top plane Extrude Boss; 2. Right plane Revolve Cut; 3. Face Chamfer; 4. Pattern; 5. Mirror about new Plane 1):**

1.
2.
3.
4.
5.
6.

**More Details on Primary Features**

**From Step (#):  *\_\_\_\_\_\_***

Sketch Plane: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3D Feature type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Key Feature Details (dimensions/end conditions):

2D Sketch(es) from 1st primary feature

**From Step (#): *\_\_\_\_\_\_***

Sketch Plane: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3D Feature type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Key Feature Details (dimensions/end conditions):

2D Sketch(es) from 2nd primary feature

**From Step (#):  *\_\_\_\_\_\_***

Sketch Plane: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3D Feature type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Key Feature Details (dimensions/end conditions):

2D Sketch(es) from 3rd primary feature

**Potential Challenges:**

# PROCESS DOCUMENTATION

## Illustration & clear/concise discussion of sketches and pattern features (including relations, reference geometry, and order of implementation) (2 pts)

## Annotated design tree showing fully-defined sketches

## Lessons learned (at least three with substantive explanation)

# FINAL PRODUCTS

## Accurate/attractive solid model

## Illustration of global variables and equations used (at least 2 global variables and 2 equations)

## Illustration of design table and each configuration (at least 3) (2 pts)