# **CHECKSHEET FOR LOFT AND SWEEP ASSIGNMENT (HW8)**

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

**Pre-CAD Plan (if using the tutorial, focus on modifications)**

/5

\_\_\_ Image (from tutorial or internet search) of selected tool being modeled (1/2 pt)

\_\_\_ Bulleted list of feature creation steps (list features, not sketches)

\_\_\_ Identification/description of basic 2D sketches and planes to create shapes of handle and tool end(s)

\_\_\_ Inclusion of key dimensions and supporting relations

\_\_\_ Selection/positioning of origin in 2D sketches (1/2 pt)

**Above and Beyond (Exemplary)**

\_\_\_ Successfully minimized dimensions and supporting relations through thoughtful placement

\_\_ Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Process Documentation**

\_\_ Clear visualization of sketches and relations (w/ brief captions)

/5

\_\_ Rationale for usage of sketch tools and planes (bullet points) (½ point)

\_\_ Annotated and expanded design tree

\_\_ Rationale for implementation of SW features (bullet points) (½ point)

\_\_ Compelling lessons learned (e.g., about lofts, sweeps, and use of reference geometry)

**Above and Beyond (Exemplary)**  
\_\_ Use of guide curve(s) to customize shape

\_\_ Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Products** (based on finished model and drawing)

\_\_ Fully-defined sketches in design tree

/5

\_\_ Screenshot of summary tab information

\_\_ Customized appearance of solid model

\_\_ Multiple, non-redundant views in 3rd angle orientation (use ME drawing template) with at least 3 key dimensions and linked properties

Point Deductions

\_\_\_ No cover page (-1.5)

\_\_\_ Not a .doc/.docx (-1.5)

\_\_\_ Incorrect filename(-1.5)

**Above and Beyond (Exemplary)**\_\_ Creativity (or accuracy) of solid model

\_\_ Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Pre-CAD Plan

## Image of tool (pasted from internet search):

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| --- |
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Reference image of tool that will be replicated (or modified)

## Initial Assumptions: (Ex: All fillets have radius of 0.25 inches)

## 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)



## More Details on Primary Features (loft/sweep/extrude/revolve bosses

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

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

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

Key Feature Details (dimensions/end conditions):

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|  |

2D sketch **profile** from 1st primary feature

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2D sketch **profile** #2 from 1st primary feature (if needed)

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|  |

2D sketch **path, additional profiles, and/or guide curves** from 1st primary feature (if needed)

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

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

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

Key Feature Details (dimensions/end conditions):

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2D sketch **profile** from 1st primary feature

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| --- |
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2D sketch **profile** #2 from 1st primary feature (if needed)

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| --- |
|  |

2D sketch **path, additional profiles, and/or guide curves** from 2nd primary feature (if needed)

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

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

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

Key Feature Details (dimensions/end conditions):

|  |
| --- |
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2D sketch **profile** from 1st primary feature

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| --- |
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2D sketch **profile** #2 from 1st primary feature (if needed)

|  |
| --- |
|  |

2D sketch **path, additional profiles, and/or guide curves** from 3rd primary feature (if needed)

## Potential Challenges:

# Process Documentation

Clear visualization of sketches and relations (w/ brief captions)

Rationale for usage of sketch tools and planes (bullet points)

Annotated and expanded design tree

Rationale for implementation of SW features (bullet points)

## Compelling lessons learned (e.g., about lofts, sweeps, and use of reference geometry)

## (Above and Beyond) Clear visualization of loft guide curves and sweep paths (if not already illustrated above)

# Final Products

## Fully-defined sketches in design tree

## Screenshot of summary tab information

## Customized appearance of solid model

## Multiple, non-redundant views in 3rd angle orientation (using ME drawing template) with at least 3 key dimensions