

Student Name: _____

Unit No.

8

Part I. Place the letter of the key term next to the correct definition.

Term	Definition
	A placed feature that bevels a part edge and is defined by its placement, size, and angle.
	The ratio of maximum frictional force between two surfaces to the force holding them together. Term used to describe the "grippyness" of two surfaces meshing together. Slippery objects have a very low coefficient of friction.
	A part or subassembly placed into another assembly. Assembly _____ may be single parts or parts combined that operate as a unit (or subassembly). _____ may be treated as parts within other assemblies.
	Parametric dimensions that control sketch size. When dimensions are changed, the sketch resizes. Dimensional constraints may be expressed as numeric constants, as variables in equations, or in parameter files.
	A placed feature applied to edges and corners of a 3D model. A _____ feature is defined by its type, radius, and placement.
	The resistance that one surface or object encounters when sliding against another.
	Features, sketches, or subassemblies that can be used in more than one design are designated as _____ and saved in a file with an IDE extension.
	The frictional force which opposes the motion of an object while it is moving.
	Sketch geometry that is copied across a centerline.
	The amount of force holding two surfaces together. For an object sitting on a level surface, this value is equivalent to the objects weight as caused by gravity.
	The measure of how see-through an assembly component is.
	Multiple instances of a placed or sketched feature arrayed in a specified pattern. They are defined by type (rectangular or circular), orientation, number of features, and spacing between features.
	A 2-dimensional (flat) part face.

	A closed loop defined by sketched or reference geometry that represents a cross section of a feature. An open _____ defined by sketched segments, arcs, or splines may define a surface shape or extend to boundaries to close a region. It may enclose islands.
	Geometry (model edges, vertices, work axes, work points, or other sketch geometry) projected onto the active sketch plane as reference geometry. May include edges of a selected assembly component that intersects the sketch plane when it was cut in an assembly cross section.
	A characteristic of a Microsoft Windows file that can be manipulated from an application or Microsoft Windows Explorer. These include author or designer and creation date and may also be unique properties assigned by applications or users. Specifying these can be useful when searching for part or assembly files.
	A solid feature created by revolving a profile around an axis.
	In an assembly, a view of the model defined by temporarily hiding portions of components or features on one side of a specified cutting plane.
	The frictional force which opposes the motion of an object before it starts moving.
	An assembly, part, or drawing file that contains predefined file properties. To create a file based on a _____, you open a _____ file, create the content, and then save it with a unique file name. Predefined properties can include visible default reference planes, customized grid settings, color scheme, drafting standards, and so on.
	The friction between a drive member, wheel, and the surface it moves upon. The amount of force a wheel can apply to a surface before it slips.
	The pattern on the surface of a tire.

A. Component **B.** Section View **C.** Plane **D.** Friction **E.** Template
F. Coefficient of Friction **G.** Tread **H.** iFeature **I.** Revolve
J. Projected Geometry **K.** Mirror sketches **L.** Kinetic Friction **M.** Fillet
N. Pattern **O.** Traction **P.** Normal Force **Q.** Properties **R.** Dimension
S. Profile **T.** Chamfer **U.** Opacity **V.** Static Friction

Part II. Fill in the blanks.

_____ friction is the frictional force between two objects that are NOT moving relative to each other.

_____ friction is the frictional force between two surfaces that ARE moving relative to each other (sliding along each other). Once an object has overcome _____ friction and begins to move, it has this type of friction acting on it.

A _____ is a constant which describes the "grippyness" of two surfaces sliding against one another.

The force that presses the two sliding surfaces together is referred to as _____. This force is always perpendicular to the two surfaces.

The maximum force of friction (F_f) between two surfaces is equal to the coefficient of friction (C_f) of those two surfaces multiplied by the _____ force (N) holding those surfaces together.

There are two factors which determine the maximum frictional force that can occur between two surfaces: _____ of friction and _____ force.

_____ is defined as friction between a drive member (wheel) and the surface it moves upon. It is the amount of force a wheel can apply to a surface before it slips.

Part III. Place the letter of the Inventor technical term next to the correct definition.

Term	Description
	Use a plane or work plane to temporarily slice away a portion of a model.
	Used to create a part or assembly while working in an existing assembly.
	In dialog boxes, it provides access to file listings in Windows Explorer.
	Projects shapes (model edges, vertices, work axes, work points, or other sketch geometry) onto the active sketch plane as reference geometry.
	Straight curve bounded by two endpoints. This tool on the Sketch toolbar chains line segments together and creates arcs tangent or perpendicular to existing curves.
	Use to manually apply four types of centerlines and center marks to individual features or parts in a drawing view: Center Mark, Centerline, Centerline Bisector, and Centered Pattern.
	Adds dimensions to a sketch. Dimensions control the size of a part. They can be expressed as numeric constants, as variables in an equation, or in parameter files.
	Use to mirror sketch geometry across a centerline.
	Use this to quit in-place editing and quickly return to the desired environment. The destination depends on which modeling environment you are working in.
	Sweeps one or more sketched profiles around an axis. If the revolved feature is the first feature in a part file, it is the base feature.
	Use this tool when creating or editing a sketched feature to model edges onto the active sketch plane from a component cut by a section plane. A projected cut edge is placed in the browser under the Sketch symbol.
	Creates a circle from a center point and radius.

	<p>Use this when creating axes, sketch planes, or termination planes, or to position cross-sectional views or cutting planes.</p> <p>Use this:</p> <ul style="list-style-type: none"> • When a part face is not available as a sketch plane for sketching new features. • When an intermediate position is required to define other work planes (for example, at an angle to a face at an offset distance).
	A sketch consists of the sketch plane, a coordinate system, 2D curves, and the dimensions and constraints applied to the curves.
	<p>These are one or more features that can be saved and reused in other designs. You can create an _____ from any sketched feature that you determine to be useful for other designs. Features dependent on the sketched feature are included in the _____. After you create an _____ and store it in a catalog, you can place it in a part by dragging it from Windows Explorer and dropping it in the part file or by using the Insert _____ tool.</p>
	This causes lines, ellipse axes, or pairs of points to lie parallel to the X axis of the sketch coordinate system.
	A geometric constraint that causes selected arcs and circles to have the same radius or selected lines to have the same length.
	Use to represent an area on a model face that is embossed or engraved. You create the profile as sketch text or sketch geometry in a sketch, and then select the profile to project or wrap onto the model.
	These bevel part edges in both the part and assembly environments. They may be equal distance from the edge, a specified distance and angle from an edge, or a different distance from the edge for each face.
	Placed features that round off or cap interior or exterior corners or features of a part.
	Part, surface, and assembly features can be arranged in a pattern to represent hole patterns or textures, slots, notches, or other symmetrical arrangements.
	Returns the assembly display to no section view.

A. Vertical Constraint **B.** 2D Sketch **C.** Fillet **D.** Centerline **E.** Return
F. Emboss **G.** Half Section View **H.** Circular Pattern **I.** Mirror
J. General Dimension **K.** Project Geometry **L.** Revolve **M.** iFeature
N. Center Point Circle **O.** Browse Templates **P.** Work Plane
Q. End Section View **R.** Project Cut Edges **S.** Line **T.** Chamfer
U. Horizontal Constraint **V.** Create Component