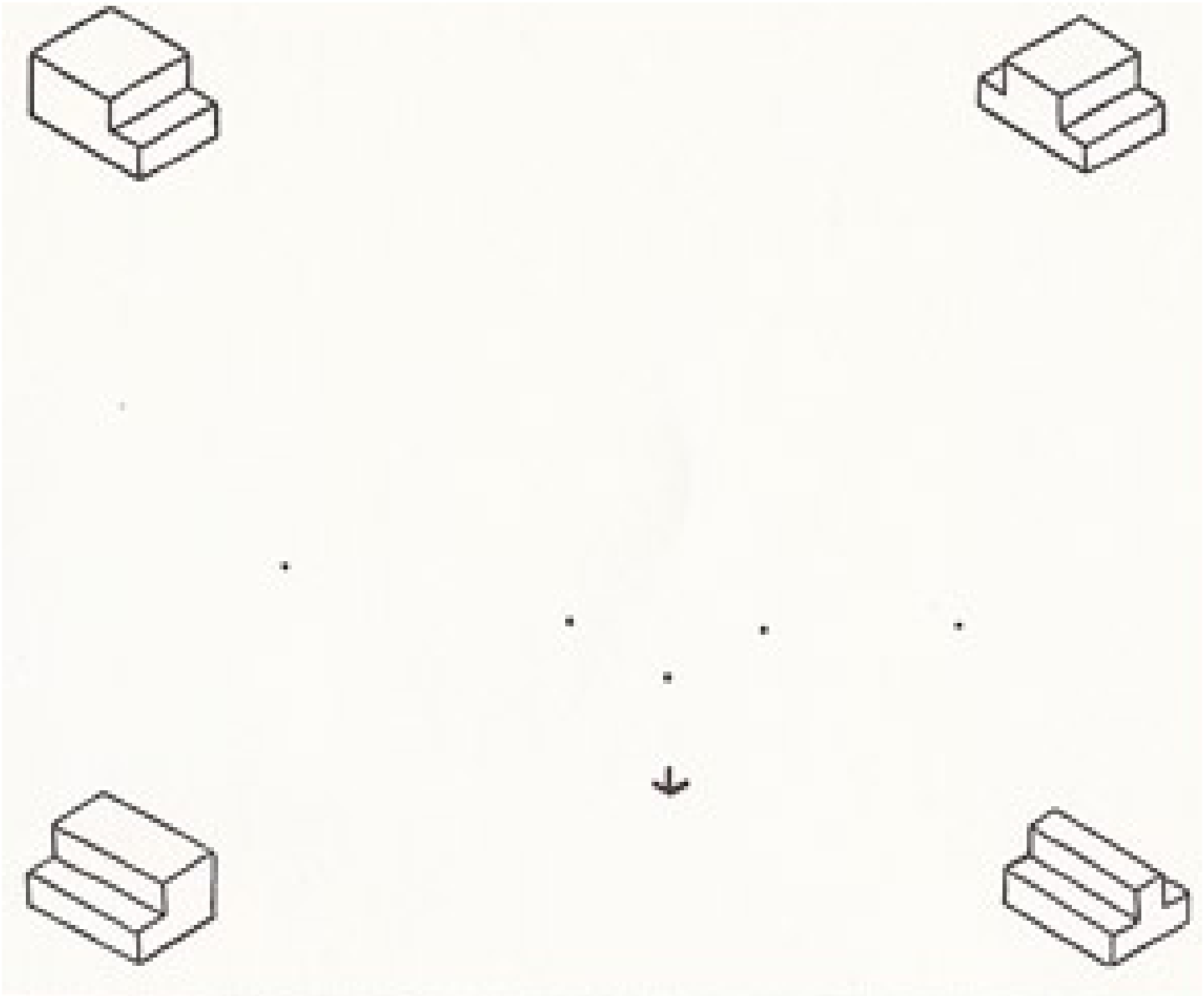
Final Exam – Study Guide Intro to CAD

1. Sketch one of the isometric shapes below:



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2. ***Explain*** how to perform an ***extrusion*** in Inventor. Your explanation should be in complete sentences, in step-by-step form.
   a) *Create a **Valid Sketch***
   b) *Click on the **Extrude** tool*
   c) *Select the **profile***
   d) *Select the **direction***
   e) *Select the **extent***
   f) *Select **Join** or **Cut** material*

3. Define Dimension: ***length** of a line, **degrees** of angle or **distance/angle** of an assembly relationship.*

4. ***Explain*** how to perform a ***revolve*** in Inventor. Your explanation should be in complete sentences, in step-by-step form.
   a) *Create a **Valid Sketch***
   b) *Create an axis line, either as part of the Valid sketch or separately.*
   c) *Click on the **Revolve** tool*
   d) *Select the **valid sketch for the profile***
   e) *Select the **axis line***
   f) *Select **Join** or **Cut** material*

5. ***Explain*** how to perform a ***sweep*** in Inventor. Your explanation should be in complete sentences, in step-by-step form.
   a) *Create a **Valid Sketch*** named Profile
   b) *Create a linear sketch that represents a **path**. Name it **Path.***
   c) *Click on the **Sweep** tool*
   d) *Select the **profile sketch for the profile***
   e) *Select the **path sketch for the path***
   f) *Select **Join** or **Cut** material*

6. Define Constraint: *Placing a **restricting condition** on a line, angle or assembly relationship. Also called a strong dimension.*

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7. Define Valid Profile: *A **closed loop sketch** that can be used to create or modify a* 3-D Model**.**

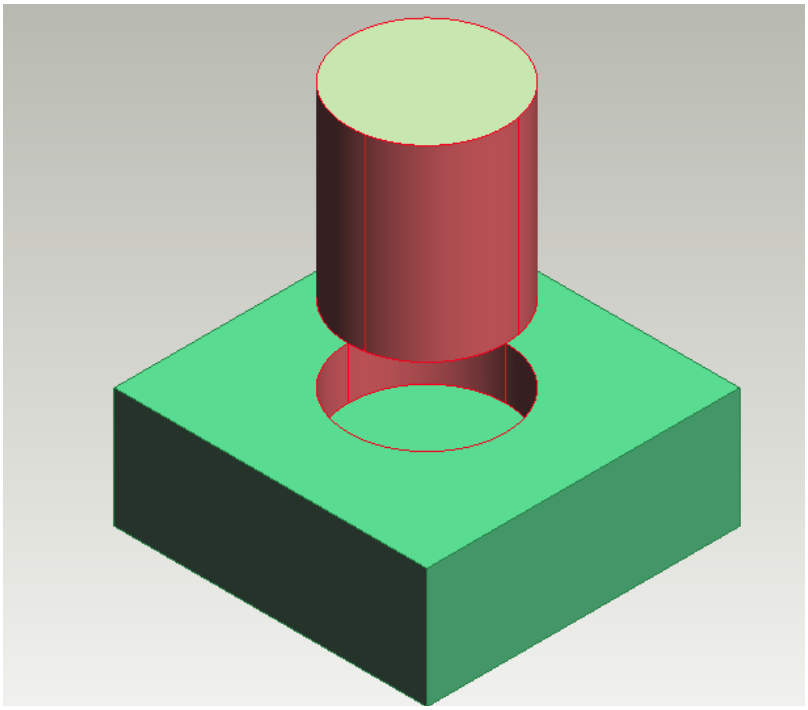
8. Define Extrusion: ***Joining or Cutting to create or modify** a 3-D Model.*

9. Define Revolve: ***revolving** a **profile** about an **axis** to create or modify a 3-D model.*

10. Define Assembly: *a combination of **parts** that are **constrained** together.*

11. Give five examples of ***Features:** Extrusion, Fillet, Chamfer, Sweep, Revolve, Emboss, Coil, Loft, Shell*

12. Using the RED surfaces ONLY, the Diagram below shows a:
    a) Mate-Mate
    b) Mate -Flush
    c) Mate-Mate-Axis



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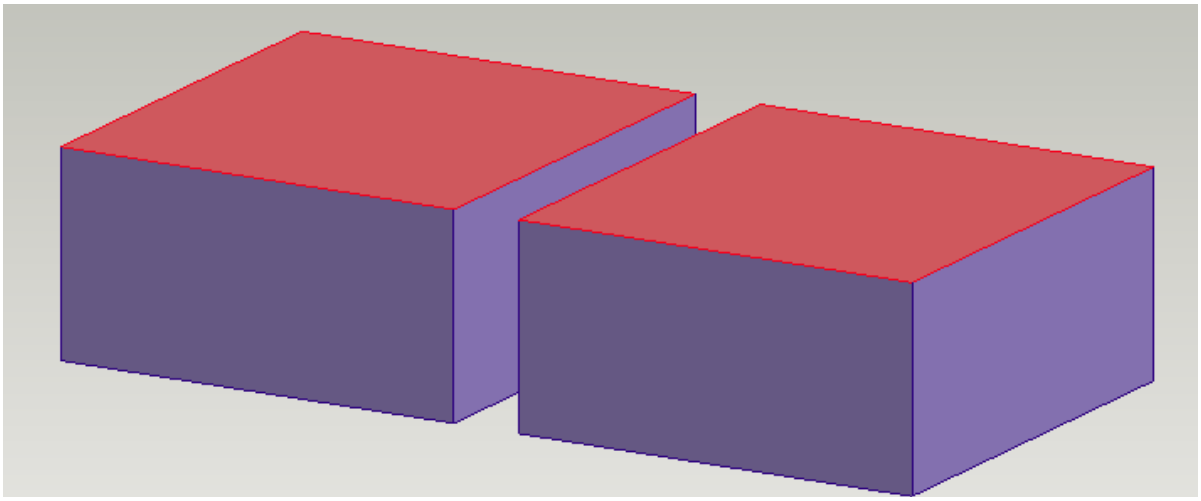
13. Using the RED surfaces ONLY, the Diagram below shows a:
    a) Mate-Mate
    b) Mate -Flush
    c) Mate-Mate-Axis



14. Using the RED surface ONLY, the Diagram below shows a:
    a) Mate-Mate
    b) Mate -Flush
    c) Mate-Mate-Axis