

Name:

Drafting & Design: Section 2 – Chapter 7: Advanced Geometric Constructions

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1. Conic sections are curved shapes produced by passing a cutting plane through a right circular \_\_\_\_\_.
2. A(n) \_\_\_\_\_ results when a circle is viewed at an angle.
3. The \_\_\_\_\_ axis of an ellipse is the largest diameter and the \_\_\_\_\_ axis is the smallest diameter.
4. What is a *trammel*?  
\_\_\_\_\_
5. What CAD command greatly simplifies the task of drawing ellipses?  
\_\_\_\_\_
6. What option of the CAD command identified in question five allows you to draw elliptical arcs by specifying the start and end angles?  
\_\_\_\_\_
7. In manual drafting, considerable time can be saved in ellipse construction by using a(n) \_\_\_\_\_ template.
8. What geometric shape is formed when a plane cuts a right circular cone at the same angle as the elements?  
\_\_\_\_\_
9. What CAD command is used to draw curves called *splines*?  
\_\_\_\_\_
10. The \_\_\_\_\_ of a hyperbola are lines that intersect at the midpoint of the transverse axis.
11. Using CAD, you can draw a hyperbola using the \_\_\_\_\_ command to draw a curve through a series of plotted points.
12. When the asymptotes are at right angles to each other, the resulting hyperbola is called a(n) \_\_\_\_\_ hyperbola or a rectangular hyperbola.

13. The spiral of Archimedes curve is used in the design of cams to change uniform \_\_\_\_\_ motion into uniform \_\_\_\_\_ motion.

14. What geometric shape is similar to a spiral, but is a three-dimensional curve rather than a plane curve?

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15. A(n) \_\_\_\_\_ is formed by the path of a fixed point on the circumference of a rolling circle.

16. What geometric shape is formed by a fixed point on a generating circle rolling on the outside of another circle as opposed to a straight line?

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17. What geometric shape is formed by a fixed point on a generating circle rolling on the inside of another circle?

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18. What is an *involute*?

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