





## GeoGebra Tutorial: Drawing a "3D" Frustum

1. Open GeoGebra. Show the axes and grid.
2. Select the point tool . Create the points A(2,0), B(0,1) and O(0,0).
3. Input:  
 $a = x(A)$   
 $b = y(B)$
4. Input:  $f(x) = \sqrt{b^2 - b^2 \cdot x^2 / a^2}$   
 (Why don't we input  $x^2/a^2 + y^2/b^2 = 1$ ?)
5. Input:  $g(x) = -f(x)$
6. Turn both functions black.
7. Input:  
 $C = (-a, 0)$   
 $D = (0, -6)$   
 $E = (0, -3)$
8. Input:  $k = 1 - y(E)/y(D)$
9. Selection the dilation tool . Dilate f(x) from point D with factor k. Do the same thing for g(x) and the points A and C.
10. Hide the axes and grid.
11. Select the segment tool . Draw the segments A'D, A'C, C'D, OE, ED, OA and EA'. Change their thickness (5 or 6) and styles.
12. Select the angle tool . Mark the two right angles.
13. Set captions for OA, OE, EA' and ED as "15 cm", "24 cm", "9 cm" and "h cm" respectively.
14. Adjust positions of points A, B, D and E.
15. Hide all unnecessary points.
16. Choose File > Export > Graphics View to Clipboard.  
 Paste it into a document.

