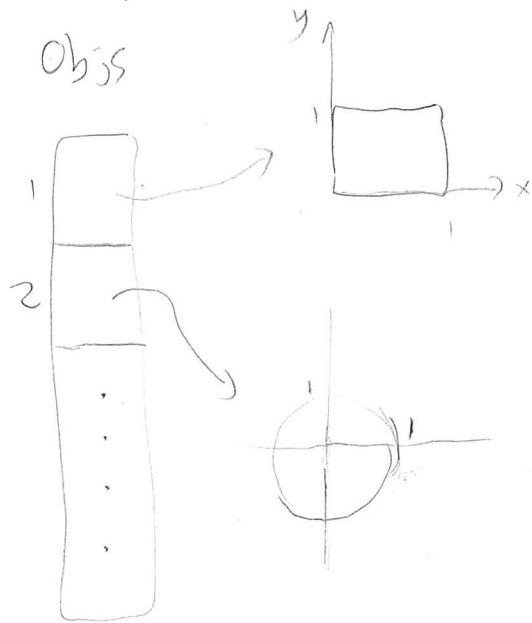
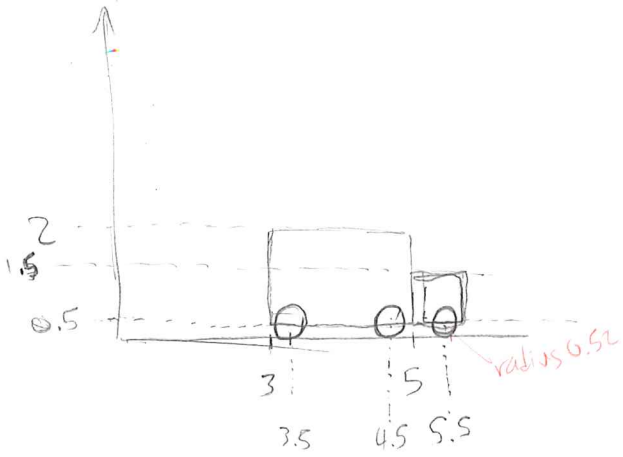


World

# Scene Graph Example

18.1



Model: 1 Back Box  
 Pose:  $T(3, 0.5)$   
 Scale:  $S(2, 1.5)$

useful to separate scale that simply determines shape of object - this part isn't passed to children (could have a scale that resizes entire truck that would be passed along)

Back Wheel  
 Model: 2  
 Pose:  $T(0.5, 0)$   
 Scale:  $S(0.5, 0.5)$

Middle Wheel  
 Model: 2  
 Pose:  $T(1.5, 0)$   
 Scale:  $S(0.5, 0.5)$

Front box  
 Model: 1  
 Pose:  $T(2, 0, 0)$   
 Scale:  $I_{2x2}$

Ex: What is the complete xform to position the front wheel?

Front Wheel  
 Model: 2  
 Pose:  $T(0.5, 0)$   
 Scale:  $S(0.5, 0.5)$

get\_P(): // traversal  
~~P~~ P = this.P  
 if has parent(this):  
   parent.get\_P() \* P  
 else  
   P

Full transform = this.get\_P() \* this.S