Design Challenge Set 2

1. Use the translate command, along with your other commands, to produce the following designs.
   a. A stack of objects: cube, sphere, cylinder
   b. A row of objects: cube, sphere, cylinder
   c. An hourglass: two cones touching at the points
   d. Two cones pointing at each other with a sphere in between
   e. A “staircase” of rectangular prisms
   f. A “spiral staircase” of cylinders
   g. A rectangular prism with two different sized rectangular prisms touching it exactly at a vertex

2. For each double command, write a single command that will create the same object without using the scale command. Test your commands on OpenSCAD to make sure your answers are correct.
   Example: scale (5) cube (10); produces the same object as cube (50);
   a. scale (6) sphere (r=4);
   b. scale (0.5) cylinder (r = 20, h = 10);
   c. scale ( [3, 2, 1] ) cube ( [2, 3, 6] );
   d. scale (5) cylinder (d1 = 4, d2 = 0, h = 10);

3. Use the rotate command: Write and test code for the following:
   a. Eight cones, each pointing along the one of the positive/negative x/y/z axis
   b. Double cones pointing along the positive and negative x-axis
   c. Three cubes forming an equilateral triangle