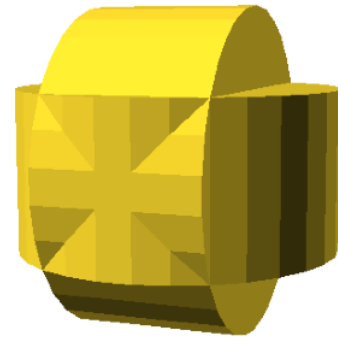# Loops - Understanding Repetition

Use the provided clues to fill in the blank squares of the crossword puzzle.

1. Write a sequence of four OpenSCAD statements that would build the same design as this for loop:

```
for (angle = [0:90:270]) {
     rotate([0, angle, 0]) cylinder(h=5, r=10);
}
```

2. Write a single for loop that would build the same design as these eight separate OpenSCAD statements:

```
translate([10,0,0])cylinder(h=1, r=4);
translate([20,0,0])cylinder(h=2, r=4);
translate([30,0,0])cylinder(h=3, r=4);
translate([40,0,0])cylinder(h=4, r=4);
translate([50,0,0])cylinder(h=5, r=4);
translate([60,0,0])cylinder(h=6, r=4);
translate([70,0,0])cylinder(h=7, r=4);
translate([80,0,0])cylinder(h=8, r=4);
```
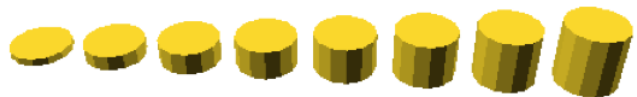
3. Compare and contrast the output of these two for loops. What's the same? What's different? Render both code segments. Why is there a difference in the rendered output?

Loop #1	Loop #2
```for(angle1 = [45:45:360]) { rotate([angle1,90,0]) translate ([0,0,10]) cylinder(h=4, r=4); }```	```for (angle2 = [45:45:360]) { translate([0,0,10]) rotate([angle2,90,0]) cylinder(h=4, r=4); }```