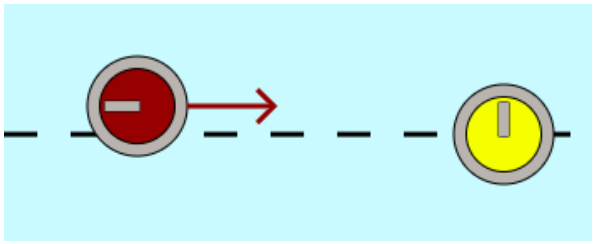
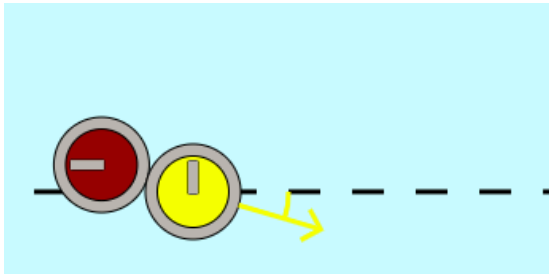
Curling Stone Momentum Problem

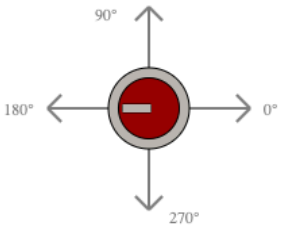
Step 1: Below is a picture of the curling stones before the collision. Fill in the picture with masses and velocities. Then calculate the momentum of the moving stone. This will be the total momentum in the x-direction since the other stone isn't moving and all motion is taking place in the x-direction before the collision



Step 2: Draw in the velocity (speed and direction) of the stone that was at rest. Find the momentum of this stone after the collision and then find the x and y components of that momentum. Show your work neatly



Step 3: Use the idea of conservation of momentum in the x and y directions separately to find the speed and direction of the stone that was the one that was moving originally. Use the compass rose to help get your direction.



Step 4: Enter your answers into your program to check that you did everything properly