Sumo (basic)

This is a basic Robosumo program. The robot self-calibrates its light sensor using the black floor as a reference. It then runs straight forward until it sees the light outer ring. Then it backs up, turns around, and runs forward again. The robot will keep doing this until its owner stops it or it runs out of battery.

You will need to set up a light sensor named "LightSensor" and two motors named "LeftMotor" and "RightMotor"

This creates a variable named "BlackFloor". It is an integer, which means that it will only hold a whole number (no fractions). This will be used to hold the number representing the black area of the floor.

```
int BlackFloor;

task main()
{
  BlackFloor = SensorValue[LightSensor] + 5;
  wait1Msec(5000);

  while(true)
  {
    motor[LeftMotor] = 100;
    motor[RightMotor] = 100;

    if (SensorValue[LightSensor] > BlackFloor)
    {
      motor[LeftMotor] = -50;
      motor[RightMotor] = -50;
      wait1Msec(500);
      motor[LeftMotor] = 50;
      wait1Msec(500);
    }
  }
}
```

The robot's light sensor reads the value of the black floor, adds 5 to that value, and stores the result in the variable BlackFloor

The **while** keyword starts a loop. The loop will run over and over again as long as the condition in the parenthesis is true. Since "true" is always true, this loop will run forever (or until someone tells the robot to stop)

The **if** keyword only runs its statements if the condition in the parenthesis is true. In this case, if the light sensor's current value is greater than the stored value for "black floor", then the robot knows it has moved off the black and onto the white.

This block of statements backs the robot up and turns it around. It runs both motors backward at ½ speed, and then the program waits one-half second (500 milliseconds) while the motors run. It then switches the left motor to running forward at ½ speed (while the right motor continues to run backward) – this spins the robot in place, again for one-half second.

The **if** section ends here

The **while** section ends here

The **task main** section ends here