

Names: \_\_\_\_\_

CS Logins: \_\_\_\_\_

## Activity #19

### Machine Learning

**Directions:** Using the update rule, compute the weights after being updated by each input point.

$w_0 = -0.5$

$w_1 = -0.5$

$w_2 = -0.5$

$\varphi\left(\sum_{i=0}^2 w_i \cdot x_i\right)$

$x_1$	$x_2$	$t$
0	0	0
0	1	1
1	0	1
1	1	1

$w_i = w_i + \eta(t - y_i) \cdot x_i$

$\eta = 0.5$

Point 1: (0, 0, 0)

Point 2: (0, 1, 1)

Point 3: (1, 0, 1)

Point 4: (1, 1, 1)