**Activation Criteria Worksheets**

Cut out each section and hand it to the “neurons” in question.

**Activation Criteria: Hidden Layer 1**

| Neuron Name | What shape they (Neurons 1a-1q) are looking for… | Shape |
| --- | --- | --- |
| 1a | Top left corner of a top circle |  |
| 1b | Top right corner of a top circle |  |
| 1c | Bottom left corner of top circle |  |
| 1d | Bottom right corner of top circle |  |
| 1e | Top left corner of a bottom circle |  |
| 1f | Top right corner of a bottom circle |  |
| 1g | Bottom left corner of bottom circle |  |
| 1h | Bottom right corner of bottom circle |  |
| 1i | Top half vertical line - left |  |
| 1j | Bottom half vertical line - left |  |
| 1k | Top half of vertical line - right |  |
| 1l | Bottom half of vertical line - right |  |
| 1m | Horizontal line center |  |
| 1n | Horizontal line bottom |  |
| 1o | Horizontal line top |  |
| 1p | Diagonal line right-left |  |
| 1q | Diagonal line left-right |  |

**Activation Criteria: Hidden Layer 2**

| Neuron Name | What shape they (Neurons 2a-2q) are looking for… | Which neurons they are looking to be activated |
| --- | --- | --- |
| 2a | Top circle | 1a, 1b, 1c, 1d |
| 2b | Bottom circle | 1e, 1f, 1g, 1h |
| 2c | Top half-circle | 1a, 1b |
| 2d | right half circle in the top half | 1b, 1d |
| 2e | right half circle in the bottom half | 1f, 1h |
| 2f | full line - left | 1i, 1j |
| 2g | Full line - right | 1k, 1l |
| 2h | Bottom horizontal line | 1n |
| 2i | Left diagonal line | 1p |
| 2j | Left L | 1k, 1m |
| 2k | Top right upside-down L | 1o, 1l, 1k |
| 2l | Bottom half of a bottom circle | 1g, 1h |

**Activation Criteria: Output Layer**

| Output Neurons | What shape they (0-9) are looking for… | Which neurons they are looking to be activated |
| --- | --- | --- |
| 0 | 0 | 2c, 2l |
| 1 | 1 | 2g OR 2f |
| 2 | 2 | 2c, 2i, 2h |
| 3 | 3 | 2d, 2e |
| 4 | 4 | 2j, 2g |
| 5 | 5 | 2j, 2l |
| 6 | 6 | 2b, 2f |
| 7 | 7 | 2k, 2g |
| 8 | 8 | 2a, 2b |
| 9 | 9 | 2a, 2g |