**Binary Logic Worksheet**

**Objectives: ALL students MUST complete Tasks 1, 2 & 3. Most students should also complete Task 4. Exceptional pathway students should complete Tasks 5 & 6, Confident pathway should try.**

**Task 1) Carefully read through the slideshow called Yr 8 Binary Logic.**

**Task 2)**

1. **Name the 3 main logic gates**
2. **Which symbol is which logic gate?**



**Task 3) Name the mathematician who invented binary logic.**

**Task 4) Use the truth tables to answer the following binary logic questions:**

**Example: 1 OR 0 = 1**

**0 OR 1 = \_\_\_\_ 1 AND 1 = \_\_\_\_ 0 OR 0 = \_\_\_\_ 1 AND 0 = \_\_\_\_**

**NOT 1 = \_\_\_\_ 1 OR 1 = \_\_\_\_**

**Task 5) Use the truth tables to help answer the following binary logic questions:**

**NOT (0 OR 1) = \_\_\_\_ 1 AND (NOT 1) = \_\_\_\_ (0 OR 0) OR 1 = \_\_\_\_ (NOT 1) OR 1 = \_\_\_\_**

**((NOT 1) OR 1) AND 1 = \_\_\_\_ (1 OR 1) AND (1 AND 1) = \_\_\_\_**

**Task 6) Using the ideas from Task 5, invent 3 more complex logical expressions of your own. Work out what they are equal to.**

**EXTENSION Task 7) The circuit diagram for Task 5 part 1 is:**

**NOT (0 OR 1)** 

0

1

**Try making some of the others!**