True or False

This task is designed for students to work in pairs or small groups. Each pair receives the twelve statements below and has to decide whether each statement is true or false. Students are expected to give a justification for their decision in each case.

Each group should be provided with a big piece of paper to be divided into two; one side for true and the other side for false. Students are required to stick the statements on the correct side together with their justification.

To assess the work it is suggested that two groups get together to compare posters with differences being argued out until a consensus is reached.

True or False

1.
$$\log_2 8 = 4$$

3.
$$\log_{10} x = 3 \Rightarrow x = 1000$$

5.
$$\log_4 x = 3 \Rightarrow x = 81$$

7.
$$\log_4 1 = 4$$

9.
$$\log_7 0 = 1$$

11.
$$\log_{10} 0.1 = \frac{1}{2}$$

2.
$$\log_2 32 = 5$$

4.
$$\log_2 \frac{1}{4} = 2$$

6.
$$\log_{10} x = 2 \Rightarrow x = 20$$

8.
$$\log_2 0.125 = -\log_2 8$$

10.
$$\log_{7} 1 = 0$$

12.
$$\log_2 2^x = x$$