## Quiz 1: Ten minutes

1. In the exercises, you built the truth table for a *majority gate*, a gate that produces a TRUE output if and only if more than half of its inputs are TRUE.

Complete a truth table for the three-input *minority gate*, a gate that produces a TRUE output if and only if less than half of its inputs are TRUE.

2. Perform the following addition of 2's complement binary numbers and indicate whether the sum overflows a 4-bit result.

1010 + 0110

## Quiz 1: Ten minutes

- 1. In the exercises, you provided the truth table for a 3-input XOR (exclusive or). Provide the truth table for a *3-input XNOR* (negated exclusive-or).
- 2. Perform the following addition of 2's complement binary numbers and indicate whether the sum overflows a 4-bit result.

0110 + 0010

## Quiz 1: Ten minutes

1. In the exercises, you built the truth table for a *majority gate*, a gate that produces a TRUE output if and only if more than half of its inputs are TRUE.

Complete a truth table for the three-input *odd gate*, a gate that produces a TRUE output if and only if an odd number of its inputs are TRUE.

2. Perform the following addition of 2's complement binary numbers and indicate whether the sum overflows a 4-bit result.

1110 + 0010