Bing

The overflow flag is set when there is a signed overflow, which means that the result of an arithmetic operation does not fit in the destination with the same sign as the operands. The two cases you mentioned are the most common examples of signed overflow, but there are also some other cases that can cause the overflow flag to be set. For example:

- If you multiply two positive numbers and get a negative result, the overflow flag is set. This can happen when the product is too large to fit in the destination. For instance, if you multiply 127 by 2 in a 8-bit register, you get -2, which sets the overflow flag. 1
- If you divide a negative number by -1 and get a positive result, the overflow flag is set. This can happen when the quotient is too large to fit in the destination. For instance, if you divide -128 by -1 in a 8-bit register, you get 128, which sets the overflow flag. 2
- If you shift a number left by one bit and get a different sign, the overflow flag is set. This can happen when the most significant bit (the sign bit) changes after the shift. For instance, if you shift 64 left by one bit in a 8-bit register, you get -128, which sets the overflow flag. 3

These are some of the other cases of overflow flag set, but they are not very common. In general, you can check the overflow flag by comparing the sign of the result with the sign of the operands. If they are different, the overflow flag is set. If they are the same, the overflow flag is cleared. 4 5