

Modulus 10 Check Digit Calculation

- For each position in the base number, there is a Modulus 10 weight factor. Positions are counted from the farthest right digit (not including the check digit itself).
- The Modulus 10 weight factor is 2 for positions 1,3,5,...31. The weight factor is 1 for positions 2,4,6,...30. Position 1 is in the ones position (far right).
- Multiply the ones position and every alternate position of the base number by 2.
- Multiply the even numbered positions of the base number by the weight factor of 1.
- Add the digits in the products of the base number times the weight factors.
- Subtract the sum from the next higher number ending in zero. The difference is the check digit.

Base number is 26606165

Base Number	2	6	6	0	6	1	6	5
Weight Factor	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>
Product	2	12	6	0	6	2	6	10

$$2+1+2+6+0+6+2+6+1+0=26$$

Next higher number ending in 0 = 30

$$30-26=4$$

Check digit is 4.

Pro Number is 266061654.

Example:

Base Number is 49698030.

Base Number	4	9	6	9	8	0	3	0
Weight Factor	1	2	1	2	1	2	1	2
Product	4	18	6	18	8	0	3	0

$$4+1+8+6+1+8+8+0+3+0=39$$

Next higher number ending in 0 = 40

$$40-39=1$$

Check digit is 1.

Pro number is 496980301.