STATE OF NEW JERSEY
HIGHER EDUCATION STUDENT ASSISTANCE AUTHORITY
NJCLASS CHECK DIGIT CALCULATION PROCEDURE

Check Digit Calculation

A check digit will be added to the account number and printed on the bill stub in order to verify the number when payment is received. The check digit is calculated by multiplying each of the digits in the invoice number by an assigned weight and then adding all of the digits of the results together and dividing that amount by 10, with the remainder being subtracted from 10 to determine the check digit.

The rules for calculating an invoice number digit using this method are as follows:

1. Apply a weight to each digit in the account number; do not include the check digit position.

Account#:	0 9 2 9 1 2 2 8 6 5	8 ←
Weights:	1 2 1 2 1 2 1 2 1 2	Check digit

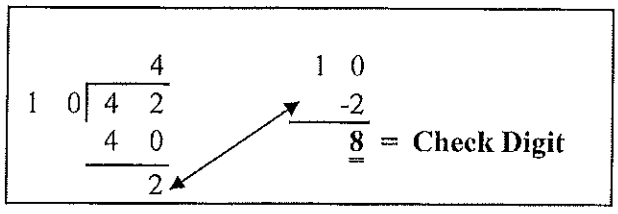
2. Start weighing with the left most digit in the invoice number string and proceed to the right with weights alternating 1,2,1,2…. DO NOT apply weights to letters OR the check digit.
3. Multiply each digit in the number string by its corresponding weight; where the result is a double-digit number, add the digits to create a single digit result.
4. Add the results for each digit to create one sum for the complete number string.
5. Divide the results by 10. If the remainder is non-zero, subtract the remainder from 10; the result is the check digit. If the remainder is zero, the check digit is zero.

Examples:

1

Invoice #	0	9	2	9	1	2	2	8	5	6
	x	x	x	x	x	x	x	x	x	x
Weight	1	2	1	2	1	2	1	2	1	2
Product	0	18	2	18	1	4	2	16	5	12
String	0	9	2	9	1	4	2	7	5	3
		*		*				*		*

Total = 42



* *The two digits of the product added together = the single digit string result.*

2	Invoice #	1	2	3	3	3	4	4	4	4	4	
		x	x	x	x	x	x	x	x	x	x	
	Weight	1	2	1	2	1	2	1	2	1	2	
	Product	1	4	3	6	3	8	4	8	4	8	Total
	String	1	4	3	6	3	8	4	8	4	8	= 49

10 ⟌ 49 = 4; 49 − 40 = 9

10 − 9 = **1 = Check Digit**

3	Invoice #	1	5	3	6	4	9	9	9	9	9	
		x	x	x	x	x	x	x	x	x	x	
	Weight	1	2	1	2	1	2	1	2	1	2	
	Product	1	10	3	12	4	18	9	18	9	18	Total
	String	1	1	3	3	4	9	9	9	9	9	= 57
			*		*		*		*		*	

10 ⟌ 57 = 5; 57 − 50 = 7

10 − 7 = **3 = Check Digit**

* *The two digits of the product added together = the single digit string result.*