We have included all the relevant data within the body of the paper itself, ensuring its seamless integration with the main text.To assist in locating the data, we have made sure to clearly label and present the relevant datasets within the Results section of the paper. Each dataset is accompanied by a descriptive caption that provides a comprehensive overview of the data's contents.Additionally, we have included specific references to the corresponding figures and tables where the data is presented, allowing for easy cross-referencing.

Table 2 presents information about the SKU sizes of all items, including a total of 16 different sizes. These sizes were derived using the arithmetic method of Tsai (2014). Table 2 is on page 12 of the paper.

Table 2: SKU item size information

Item size	**SKU**															
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Long	25	20	16	15	22	20	2	3	4	5	56	57	39	51	61	67
Wide	8	10	7	12	8	10	2	3	4	5	50	43	34	19	45	48
High	6	5	3	6	3	4	2	3	4	5	29	25	30	4	25	27

Ten different problem arithmetic cases were developed based on the types of items, and each problem arithmetic case was loaded into a packing box model. Table 3 provides detailed information on the type and number of items present in each arithmetic case. Table 3 is on page 12 of the paper.

Table 3 :Number of SKU items included in the algorithm

Algorithm	**SKU**															
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
problem01	1	1	1	1												
problem02	1	1	1	1	1											
problem03	1	1	1	1	1	1										
problem04	2	1	1	1	1	1										
problem05							3	3	1	1						
problem06							3	3	2	1						
problem07											1	1	1	1		
problem08											1	1	1	1	1	
problem09											2	1	1	1	1	
problem10											2	1	1	1	1	1

The 3D crating problem with multiple box sizes focuses on the application of strong heterogeneous crating. Table 7 displays eight randomly generated orders, each comprising two to four items. Table 2 is on page 14 of the paper.

Table 7: Order item SKU information

Algorithm	**SKU**															
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
order01						1										1
order 02				1								1				
order03			1	1		1										
order04							1	1								
order05									1				1			
order06		1					1	2								
order07		1				1			1	1						
order08					1				1	1						