

Pre-conditions
For clarity and brevity, the names of the input parameters have been abbreviated to single-letter identifiers. The corresponding mapping is provided in the table below.

Name	Abbreviation	Total values
Size	S	2
Covers	C	3
Filler Paper	F	2
Quantity	Q	10

### 1 step: Create unique pair of parameters

Unique pair combinations		
1	S	C
2	S	F
3	S	Q
4	C	F
5	C	Q
6	F	Q

2 step: Construct all possible values for each pair						
Total available values for every pair (The digits show the count of values per parameter.)						
86 unique pairs	6 pairs (3*2)	4 pairs (2*2)	20 pairs (2*10)	6 pairs (2*3)	30 pairs (3*10)	20 pairs (2*10)
#	S-C	S-F	S-Q	C-F	C-Q	F-Q
1	5.5"x 8.5 - Pearl	5.5"x 8.5 - blank	5.5"x 8.5 - 1	Pearl-blank	Pearl - 1	blank - 1
2	5.5"x 8.5 - Soft Touch	5.5"x 8.5 - wide ruled	5.5"x 8.5 - 2	Pearl-Wide Ruled	Pearl - 2	blank - 2
3	5.5"x 8.5 - Glossy	8.5"x11" - blank	5.5"x 8.5 - 3	Soft Touch - blank	Pearl - 3	blank - 3

3 step: Create test cases		
Main goal: add as many unique pairs as possible to one line		
Cases	Covered pair quantity	Total unique pairs
1 set, 6 pairs covered	6	/86
2 set, 6 pairs covered	12	/86
3 set, 6 pairs covered	18	/86

4	8.5"x11" - Pearl	8.5"x11" - wide ruled	5.5"x 8.5 - 4	Soft Touch - Wide Ruled	Pearl - 4	blank - 4
5	8.5"x11" - Soft Touch		5.5"x 8.5 - 5	Glossy-blank	Pearl - 5	blank - 5
6	8.5"x11"x 8.5 - Glossy		5.5"x 8.5 - 10	Glossy-Wide Ruled	Pearl - 10	blank - 10
7			5.5"x 8.5 - 20		Pearl - 20	blank - 20
8			5.5"x 8.5 - 50		Pearl - 50	blank - 50
9			5.5"x 8.5 -100		Pearl - 100	blank - 100
10			5.5"x 8.5 - 200		Pearl - 200	blank - 200
11			8.5"x11" - 1		Soft Touch-1	Wide Ruled-1
12			8.5"x11" - 2		Soft Touch-2	Wide Ruled-2
13			8.5"x11" - 3		Soft Touch-3	Wide Ruled-3
14			8.5"x11" - 4		Soft Touch-4	Wide Ruled-4
15			8.5"x11" - 5		Soft Touch-5	Wide Ruled-5
16			8.5"x11" - 10		Soft Touch-10	Wide Ruled-10
17			8.5"x11" - 20		Soft Touch-20	Wide Ruled-20
18			8.5"x11" - 50		Soft Touch-50	Wide Ruled-50
19			8.5"x11" - 100		Soft Touch-100	Wide Ruled-100
20			8.5"x11" - 200		Soft Touch-200	Wide Ruled-200
21					Glossy- 1	

4 set, 6 pairs covered	24	/86
5 set, 5 pairs covered	29	/86
6 set, 5 pairs covered	34	/86
7 set, 3 pairs covered	37	/86
8 set, 3 pairs covered	40	/86
9 set, 3 pairs covered	43	/86
10 set, 3 pairs covered	46	/86
11 set, 3 pairs covered	49	/86
12 set, 3 pairs covered	52	/86
13 set, 3 pairs covered	55	/86
14 set, 3 pairs covered	58	/86
12 set, 3 pairs covered	61	/86
16 set, 3 pairs covered	64	/86
17 set, 3 pairs covered	67	/86
18 set, 3 pairs covered	70	/86
19 set, 3 pairs covered	73	/86
20 set, 3 pairs covered	76	/86
21 set, 1 pair covered	77	/86

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Glossy- 2
Glossy- 3
Glossy- 4
Glossy- 5
Glossy- 10
Glossy- 20
Glossy- 50
Glossy- 100
Glossy- 200

22 set, 1 pair covered	78	/86
23 set, 1 pair covered	79	/86
24 set, 1 pair covered	80	/86
25 set, 1 pair covered	81	/86
26 set, 1 pair covered	82	/86
27 set, 1 pair covered	83	/86
28 set, 1 pair covered	84	/86
29 set, 1 pair covered	85	/86
30 set, 1 pair covered	86	/86

Color legend:	
	At least two test cases/sets already cover this pair.
Different colors	Used to avoid confusion during pair coverage. Same color means the pairs belong to the same set.

TOTAL
As a result of applying the pairwise testing technique, I was able to reduce the number of test cases from 120 (full combination coverage) to just 30, while still ensuring that all possible pairs of input values are covered. This demonstrates the efficiency of pairwise testing in significantly minimizing test effort without compromising coverage of key interactions.