ALL COMBINATIONS OF 3 PRODUCTS

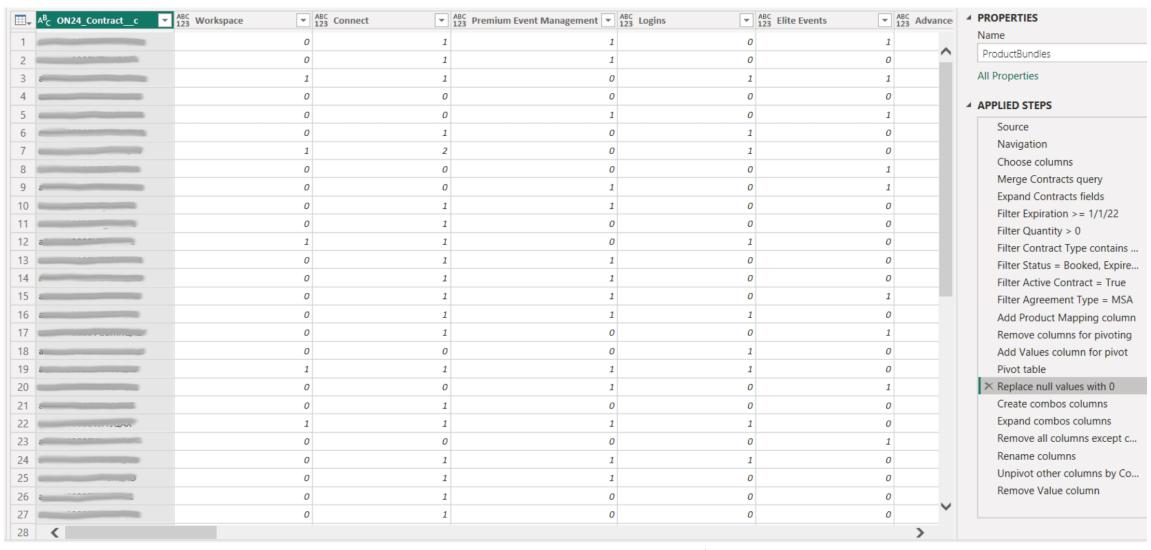| Product Combination	Frequency	% of All Contracts ▼
~~(redacted)~~	357	19.18%
Connect, Logins, Workspace		%
Connect, Live Captioning, OD Captioning		%
Connect, Logins, OD Captioning		%
Broadcast Video / VCU, Connect, Logins		%
Advanced Analytics, Connect, Engagement Hub		%
Connect, Logins, Premium Event Management		%
Advanced Analytics, Connect, Workspace		%
Advanced Analytics, Connect, Premium Event Management		%
Connect, Engagement Hub, Logins		%
Advanced Analytics, Connect, OD Captioning		%
Advanced Analytics, Logins, Workspace		%
Advanced Analytics, Broadcast Video / VCU, Connect		%
Connect, Live Captioning, Logins		%
Live Captioning, Logins, OD Captioning		%
Connect, Logins, SAML		%
Connect, Express Monitoring, Logins		%
Advanced Analytics, Connect, SAML		%
Connect, Engagement Hub, OD Captioning		%
Advanced Analytics, Logins, OD Captioning		%
Advanced Analytics, Broadcast Video / VCU, Logins		%
Breakout Rooms, Connect, Logins		%
Connect, Logins, Viewer Capacity		%
Connect, Logins, Other		%
Advanced Analytics, Engagement Hub, Logins		%
Advanced Analytics, Connect, Other		%
Advanced Analytics, Breakout Rooms, Connect		%
Advanced Analytics, Connect, Live Captioning		%
Advanced Analytics, Live Captioning, OD Captioning		%

FILTERS

Product Combination

All ⌄

Booking Forecast Team at Close

All ⌄

Marketing Segment

All ⌄

Company Segment

All ⌄

Reset Filters

61

Total Contracts

Logic Behind the Dashboard

How were the product combination percentages calculated?

ON24_Contract__c	Workspace	Connect	Premium Event Management	Logins	Elite Events	Advance...
1	0	1	1	0	1	
2	0	1	1	0	0	
3	1	1	0	1	1	
4	0	0	0	0	0	
5	0	0	1	0	1	
6	0	1	0	1	0	
7	1	2	0	1	0	
8	0	0	0	0	1	
9	0	0	1	0	1	
10	0	1	1	0	0	
11	0	1	0	0	0	
12	1	1	0	1	0	
13	0	1	1	0	0	
14	0	1	1	0	0	
15	0	1	1	0	1	
16	0	1	1	1	0	
17	0	1	0	0	1	
18	0	0	0	1	0	
19	1	1	1	1	0	
20	0	0	1	0	1	
21	0	1	0	0	0	
22	1	1	1	1	0	
23	0	0	0	0	1	
24	0	1	1	1	0	
25	0	1	1	0	0	
26	0	1	0	0	0	
27	0	1	0	0	0	
28						

PROPERTIES

Name

ProductBundles

All Properties

APPLIED STEPS

Source
Navigation
Choose columns
Merge Contracts query
Expand Contracts fields
Filter Expiration >= 1/1/22
Filter Quantity > 0
Filter Contract Type contains ...
Filter Status = Booked, Expire...
Filter Active Contract = True
Filter Agreement Type = MSA
Add Product Mapping column
Remove columns for pivoting
Add Values column for pivot
Pivot table
✕ Replace null values with 0
Create combos columns
Expand combos columns
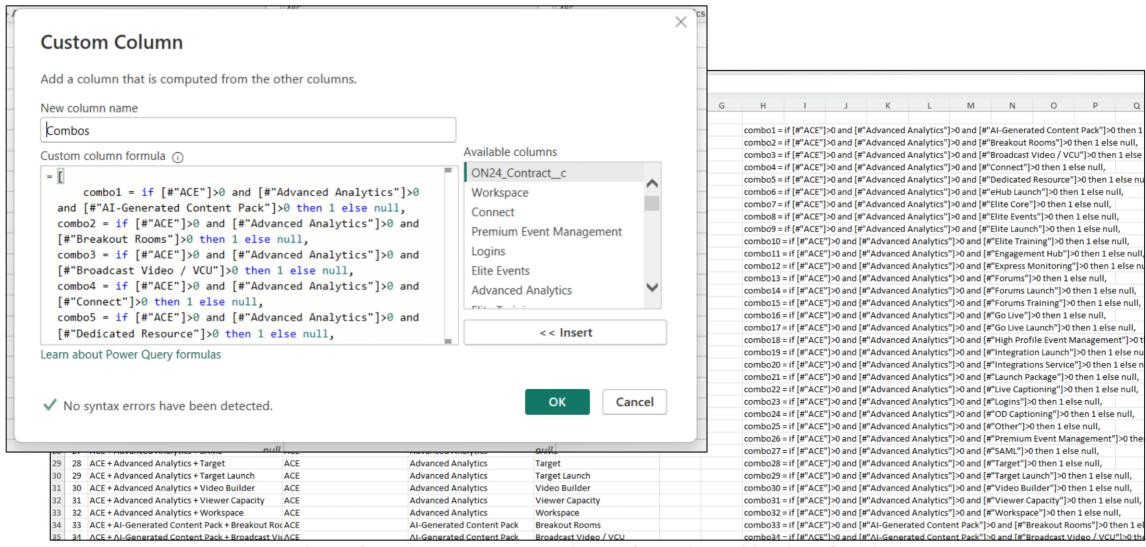Remove all columns except c...
Rename columns
Unpivot other columns by Co...
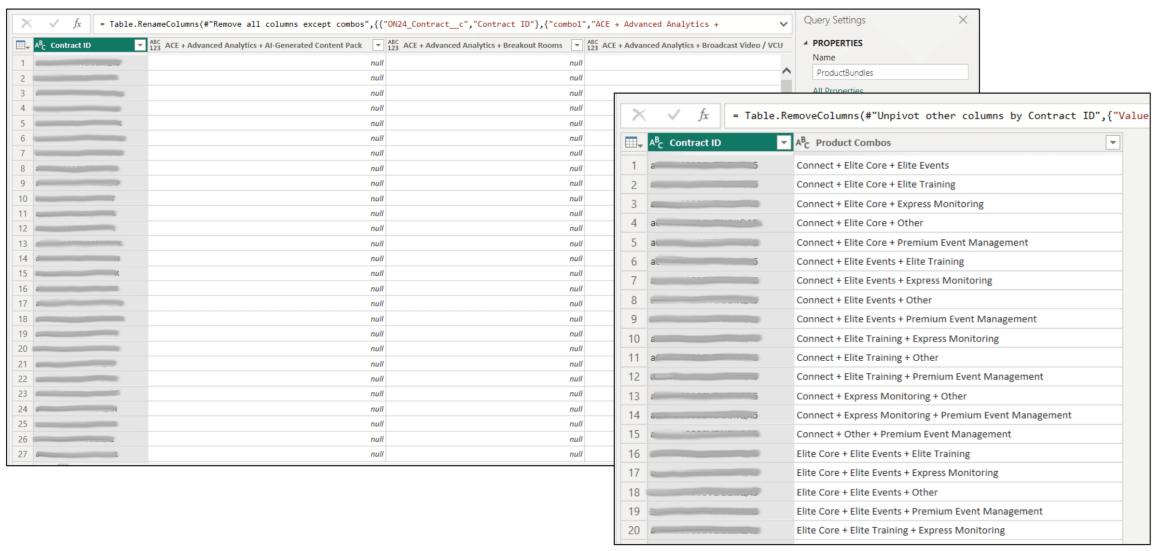Remove Value column

Product bundle data is stored in the form of contract line items (i.e., each row represents a product associated with a Contract ID). So, first step is to pivot so each column represents a product.

*Data is blurred or altered for confidentiality

How were the product combination percentages calculated?

```
In [3]: print('Total Combinations of 3 Products: '+str(math.comb(34,3)))
Total Combinations of 3 Products: 5984
```

```
for c in product:
    for b in product[(product.index(c)+1):]:
        for a in product[(product.index(b)+1):]:
            combo_name=c+" + "+b+" + "+a
```

	A	B (Combo Name)	C (Product 1)	D (Product 2)	E (Product 3)	
2	1	ACE + Advanced Analytics + AI-Generated Conter	ACE	Advanced Analytics	AI-Generated Content Pack	combo1 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"AI-Generated Content Pack"]>0 then 1
3	2	ACE + Advanced Analytics + Breakout Rooms	ACE	Advanced Analytics	Breakout Rooms	combo2 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Breakout Rooms"]>0 then 1 else null,
4	3	ACE + Advanced Analytics + Broadcast Video / VC	ACE	Advanced Analytics	Broadcast Video / VCU	combo3 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Broadcast Video / VCU"]>0 then 1 else
5	4	ACE + Advanced Analytics + Connect	ACE	Advanced Analytics	Connect	combo4 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Connect"]>0 then 1 else null,
6	5	ACE + Advanced Analytics + Dedicated Resource	ACE	Advanced Analytics	Dedicated Resource	combo5 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Dedicated Resource"]>0 then 1 else nu
7	6	ACE + Advanced Analytics + eHub Launch	ACE	Advanced Analytics	eHub Launch	combo6 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"eHub Launch"]>0 then 1 else null,
8	7	ACE + Advanced Analytics + Elite Core	ACE	Advanced Analytics	Elite Core	combo7 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Elite Core"]>0 then 1 else null,
9	8	ACE + Advanced Analytics + Elite Events	ACE	Advanced Analytics	Elite Events	combo8 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Elite Events"]>0 then 1 else null,
10	9	ACE + Advanced Analytics + Elite Launch	ACE	Advanced Analytics	Elite Launch	combo9 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Elite Launch"]>0 then 1 else null,
11	10	ACE + Advanced Analytics + Elite Training	ACE	Advanced Analytics	Elite Training	combo10 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Elite Training"]>0 then 1 else null,
12	11	ACE + Advanced Analytics + Engagement Hub	ACE	Advanced Analytics	Engagement Hub	combo11 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Engagement Hub"]>0 then 1 else null,
13	12	ACE + Advanced Analytics + Express Monitoring	ACE	Advanced Analytics	Express Monitoring	combo12 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Express Monitoring"]>0 then 1 else nu
14	13	ACE + Advanced Analytics + Forums	ACE	Advanced Analytics	Forums	combo13 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Forums"]>0 then 1 else null,
15	14	ACE + Advanced Analytics + Forums Launch	ACE	Advanced Analytics	Forums Launch	combo14 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Forums Launch"]>0 then 1 else null,
16	15	ACE + Advanced Analytics + Forums Training	ACE	Advanced Analytics	Forums Training	combo15 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Forums Training"]>0 then 1 else null,
17	16	ACE + Advanced Analytics + Go Live	ACE	Advanced Analytics	Go Live	combo16 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Go Live"]>0 then 1 else null,
18	17	ACE + Advanced Analytics + Go Live Launch	ACE	Advanced Analytics	Go Live Launch	combo17 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Go Live Launch"]>0 then 1 else null,
19	18	ACE + Advanced Analytics + High Profile Event M	ACE	Advanced Analytics	High Profile Event Management	combo18 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"High Profile Event Management"]>0 t
20	19	ACE + Advanced Analytics + Integration Launch	ACE	Advanced Analytics	Integration Launch	combo19 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Integration Launch"]>0 then 1 else nu
21	20	ACE + Advanced Analytics + Integrations Service	ACE	Advanced Analytics	Integrations Service	combo20 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Integrations Service"]>0 then 1 else n
22	21	ACE + Advanced Analytics + Launch Package	ACE	Advanced Analytics	Launch Package	combo21 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Launch Package"]>0 then 1 else null,
23	22	ACE + Advanced Analytics + Live Captioning	ACE	Advanced Analytics	Live Captioning	combo22 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Live Captioning"]>0 then 1 else null,
24	23	ACE + Advanced Analytics + Logins	ACE	Advanced Analytics	Logins	combo23 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Logins"]>0 then 1 else null,
25	24	ACE + Advanced Analytics + OD Captioning	ACE	Advanced Analytics	OD Captioning	combo24 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"OD Captioning"]>0 then 1 else null,
26	25	ACE + Advanced Analytics + Other	ACE	Advanced Analytics	Other	combo25 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Other"]>0 then 1 else null,
27	26	ACE + Advanced Analytics + Premium Event Man	ACE	Advanced Analytics	Premium Event Management	combo26 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Premium Event Management"]>0 the
28	27	ACE + Advanced Analytics + SAML	ACE	Advanced Analytics	SAML	combo27 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"SAML"]>0 then 1 else null,
29	28	ACE + Advanced Analytics + Target	ACE	Advanced Analytics	Target	combo28 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Target"]>0 then 1 else null,
30	29	ACE + Advanced Analytics + Target Launch	ACE	Advanced Analytics	Target Launch	combo29 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Target Launch"]>0 then 1 else null,
31	30	ACE + Advanced Analytics + Video Builder	ACE	Advanced Analytics	Video Builder	combo30 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Video Builder"]>0 then 1 else null,
32	31	ACE + Advanced Analytics + Viewer Capacity	ACE	Advanced Analytics	Viewer Capacity	combo31 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Viewer Capacity"]>0 then 1 else null,
33	32	ACE + Advanced Analytics + Workspace	ACE	Advanced Analytics	Workspace	combo32 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Workspace"]>0 then 1 else null,
34	33	ACE + AI-Generated Content Pack + Breakout Roc	ACE	AI-Generated Content Pack	Breakout Rooms	combo33 = if [#"ACE"]>0 and [#"AI-Generated Content Pack"]>0 and [#"Breakout Rooms"]>0 then 1 el
35	34	ACE + AI-Generated Content Pack + Broadcast Vic	ACE	AI-Generated Content Pack	Broadcast Video / VCU	combo34 = if [#"ACE"]>0 and [#"AI-Generated Content Pack"]>0 and [#"Broadcast Video / VCU"]>0 the

Calculate and extract all possible combinations of 3 products via Python, then prewrite query formula in Excel.

How were the product combination percentages calculated?

Custom Column

Add a column that is computed from the other columns.

New column name

Combos

Custom column formula ⓘ

```
= [
    combo1 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0
    and [#"AI-Generated Content Pack"]>0 then 1 else null,
    combo2 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and
    [#"Breakout Rooms"]>0 then 1 else null,
    combo3 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and
    [#"Broadcast Video / VCU"]>0 then 1 else null,
    combo4 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and
    [#"Connect"]>0 then 1 else null,
    combo5 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and
    [#"Dedicated Resource"]>0 then 1 else null,
```

Available columns

- ON24_Contract__c
- Workspace
- Connect
- Premium Event Management
- Logins
- Elite Events
- Advanced Analytics

<< Insert

Learn about Power Query formulas

✓ No syntax errors have been detected.

OK   Cancel

		G	H	I	J	K	L	M	N	O	P	Q

combo1 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"AI-Generated Content Pack"]>0 then 1
combo2 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Breakout Rooms"]>0 then 1 else null,
combo3 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Broadcast Video / VCU"]>0 then 1 else
combo4 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Connect"]>0 then 1 else null,
combo5 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Dedicated Resource"]>0 then 1 else nu
combo6 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"eHub Launch"]>0 then 1 else null,
combo7 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Elite Core"]>0 then 1 else null,
combo8 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Elite Events"]>0 then 1 else null,
combo9 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Elite Launch"]>0 then 1 else null,
combo10 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Elite Training"]>0 then 1 else null,
combo11 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Engagement Hub"]>0 then 1 else null,
combo12 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Express Monitoring"]>0 then 1 else ni
combo13 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Forums"]>0 then 1 else null,
combo14 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Forums Launch"]>0 then 1 else null,
combo15 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Forums Training"]>0 then 1 else null,
combo16 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Go Live"]>0 then 1 else null,
combo17 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Go Live Launch"]>0 then 1 else null,
combo18 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"High Profile Event Management"]>0 t
combo19 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Integration Launch"]>0 then 1 else nu
combo20 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Integrations Service"]>0 then 1 else n
combo21 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Launch Package"]>0 then 1 else null,
combo22 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Live Captioning"]>0 then 1 else null,
combo23 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Logins"]>0 then 1 else null,
combo24 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"OD Captioning"]>0 then 1 else null,
combo25 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Other"]>0 then 1 else null,
combo26 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Premium Event Management"]>0 the
combo27 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"SAML"]>0 then 1 else null,
combo28 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Target"]>0 then 1 else null,
combo29 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Target Launch"]>0 then 1 else null,
combo30 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Video Builder"]>0 then 1 else null,
combo31 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Viewer Capacity"]>0 then 1 else null,
combo32 = if [#"ACE"]>0 and [#"Advanced Analytics"]>0 and [#"Workspace"]>0 then 1 else null,
combo33 = if [#"ACE"]>0 and [#"AI-Generated Content Pack"]>0 and [#"Breakout Rooms"]>0 then 1 el
combo34 = if [#"ACE"]>0 and [#"AI-Generated Content Pack"]>0 and [#"Broadcast Video / VCU"]>0 the

29	28	ACE + Advanced Analytics + Target	ACE	Advanced Analytics	Target
30	29	ACE + Advanced Analytics + Target Launch	ACE	Advanced Analytics	Target Launch
31	30	ACE + Advanced Analytics + Video Builder	ACE	Advanced Analytics	Video Builder
32	31	ACE + Advanced Analytics + Viewer Capacity	ACE	Advanced Analytics	Viewer Capacity
33	32	ACE + Advanced Analytics + Workspace	ACE	Advanced Analytics	Workspace
34	33	ACE + AI-Generated Content Pack + Breakout Roc	ACE	AI-Generated Content Pack	Breakout Rooms
35	34	ACE + AI-Generated Content Pack + Broadcast Vic	ACE	AI-Generated Content Pack	Broadcast Video / VCU

Copy and past formula to mass 5984 columns for each combination of products.

Data is blurred or altered for confidentiality

How were the product combination percentages calculated?

Rename columns then unpivot to assign product combinations to each Contract ID.

*Data is blurred or altered for confidentiality