Part D [16 points]

The tables below are PARTIAL views of a book of worksheets.
All ranges are named using the labels above them, which are **bold**. Labels are NOT included
in the ranges they name. Names for additional ranges are indicated by Comment balloons.

CompositionsTable

SequenceId	ComposerId	Composition	Type	Instrument	Key
1	1	Giselle	Ballet	Orchestra	*CompositionLabels*
2	2	Iberia	Suite	Orchestra	
3	3	Brandenburg Conc. 6	Concerto	Orchestra	
4	3	Violin Concerto	Concerto	Violin	E Major
5	3	Violin Concerto	Concerto	Violin	A Minor
6	3	Brandenburg Conc. 2	Concerto	Orchestra	
7	3	Mass in B Minor	Choral		B Minor
8	3	Brandenburg Conc. 4	Concerto	Orchestra	
9	3	St. Matthew Passion	Choral		
10	3	Brandenburg Conc. 3	Concerto	Orchestra	
11	3	Brandenburg Conc. 1	Concerto	Orchestra	
12	3	Brandenburg Conc. 5	Concerto	Orchestra	
13	4	Violin Concerto	Concerto	Violin	
14	4	Piano Concerto 1	Concerto	Piano	
15	4	Piano Concerto 2	Concerto	Piano	G
16	4	Piano Concerto 3	Concerto	Piano	E
17	5	Symphony 4	Symphony	Orchestra	B Flat
18	5	Piano Concerto 4	Concerto	Piano	G Major
19	5	Piano Concerto 5	Concerto	Piano	E Flat Maj
20	5	Symphony 6	Symphony	Orchestra	F
21	5	Symphony 3	Symphony	Orchestra	E Flat
22	5	Symphony 5	Symphony	Orchestra	C Minor
23	5	Symphony 7	Symphony	Orchestra	A
24	5	Symphony 8	Symphony	Orchestra	F
25	5	Piano Concerto 1	Concerto	Piano	C
26	5	Sonata 23	Sonata	Piano	F Minor
27	5	Piano Concerto 3	Concerto	Piano	C Minor
28	5	Sonata 21	Sonata	Piano	C
29	5	Violin Concerto	Concerto	Violin	D

ComposersTable

Id	Composers	Initial	YOB	YOD	Country
1	Adam	A.	1803	1856	France
2	Albeniz	I.	1860	1909	Spain
3	Bach	J.S.	1685	1750	Germany
4	Bartok	B.	1881	1945	Hungary
5	Beethoven	L. van	1770	1827	Germany
6	Berlioz	H.	1803	1869	France
7	Brahms	J.	1833	1897	Germany
8	Britten	B.	1913	1976	England
9	Bruch	M.	1838	1920	Germany
10	Chopin	F.	1810	1849	Poland

Part D3

Part D [16 points]

Search

Composer	Composer_ID	Number_of_Works

WorksLabels

Work#	Composition	Type	Instrument	Key

When the user enters a composer's name on the **Search** page formulas produce the rest of the content.

Search

Composer	Composer_ID	Number_of_Works
Bach	3	10

Work#	Composition	Type	Instrument	Key
1	Brandenburg Conc. 6	Concerto	Orchestra	
2	Violin Concerto	Concerto	Violin	E Major
3	Violin Concerto	Concerto	Violin	A Minor
4	Brandenburg Conc. 2	Concerto	Orchestra	
5	Mass in B Minor	Choral		B Minor
6	Brandenburg Conc. 4	Concerto	Orchestra	
7	St. Matthew Passion	Choral		
8	Brandenburg Conc. 3	Concerto	Orchestra	
9	Brandenburg Conc. 1	Concerto	Orchestra	
10	Brandenburg Conc. 5	Concerto	Orchestra	

Write a formula for **Composer_ID**. [4]
=LOOKUP(Composer, Composers, Id)

Write a formula for **Number_of_Works**. [3]
=COUNTIF(ComposerId, Composer_ID)

The **Work#** column uses a set of Recurrence formulas that only display results when it is appropriate, that is, when there is a value in **Number_of_Works.**
Write the initialising formula (in A5). [5]
=IF(ISNUMBER(Number_of_Works), 1, "")   OR
=IF(Number_of_Works > 0, 1, "")

All other content is provided by a single, but complex, formula. Most of it is shown below.
Add the missing component. [4]
(**Hint**: *It calculates the column number for the INDEX function.*)

=INDEX(CompositionsTable, MATCH(Composer_ID, ComposerId) – Number_of_Works +
Works, MATCH(WorksLabels, CompositionLabels, 0)   )

Part D3