

# Anvendt Statistik og KeHaTools Kapitel 8: Goodness-of-fit- tests

# Oversigt

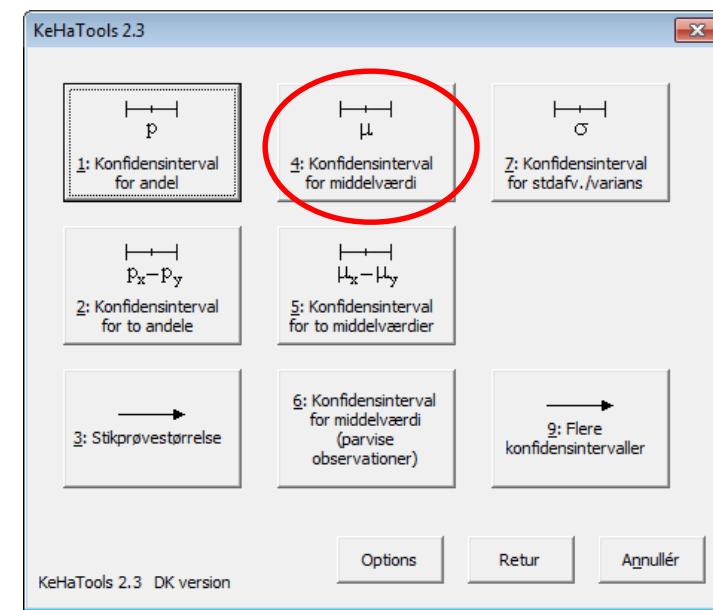
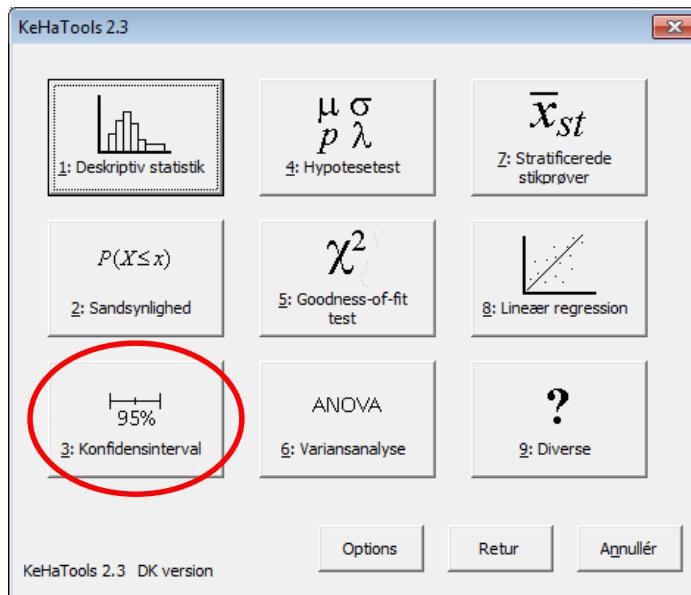
- Eksempel 4.1 Konfidensinterval for middelværdi ( $t$ )
- Eksempel 4.2 Stikprøvestørrelse
- Eksempel 4.3 Konfidensinterval for middelværdi ( $z$ )
- Eksempel 4.4 Konfidensinterval for standardafvigelse
- Eksempel 4.5 Konfidensinterval for to middelværdier

# Data

The screenshot shows a Microsoft Excel window with the title bar "GS\_Data.xlsx - Microsoft Excel". The ribbon menu is visible with tabs like Filer, Stat, Ind, Sidi, For, Dat, Ger, Vis, Udv, etc. The "Skrifttype" tab is selected. The main area displays a table titled "Eksempel 4.1" with data in columns A through F. The first row contains the numbers 723, 911, 726, 670, and 696. The second row contains 729, 775, 767, 378, and 637. The third row contains 839, 1067, 913, 1081, and 383. The fourth row contains 286, 840, 865, 896, and 809. The fifth row is empty. The sixth and seventh rows are also empty. The formula bar shows "A1" and "Eksempel 4.1". The status bar at the bottom shows "Kapitel 1", "Kapitel 2", "Kapitel 3", "100%", and zoom controls.

	A	B	C	D	E	F
1	Eksempel 4.1					
2	723	911	726	670	696	
3	729	775	767	378	637	
4	839	1067	913	1081	383	
5	286	840	865	896	809	
6						
7						

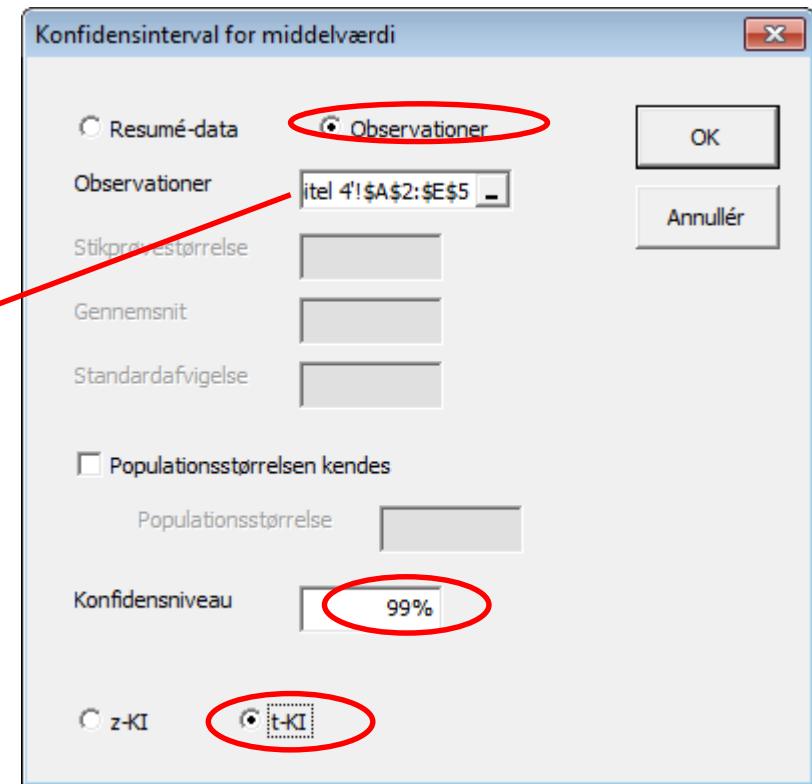
# Eksempel 4.1 - I



# Eksempel 4.1 - II

The screenshot shows a Microsoft Excel spreadsheet titled "GS\_Data.xlsx". The active cell is A1, which contains the text "Eksempel 4.1". Below it is a table with five columns labeled B through E and five rows labeled 1 through 5. The data in the table is as follows:

	B	C	D	E	
1	723	911	726	670	696
2	729	775	767	378	637
3	839	1067	913	1081	383
4	286	840	865	896	809



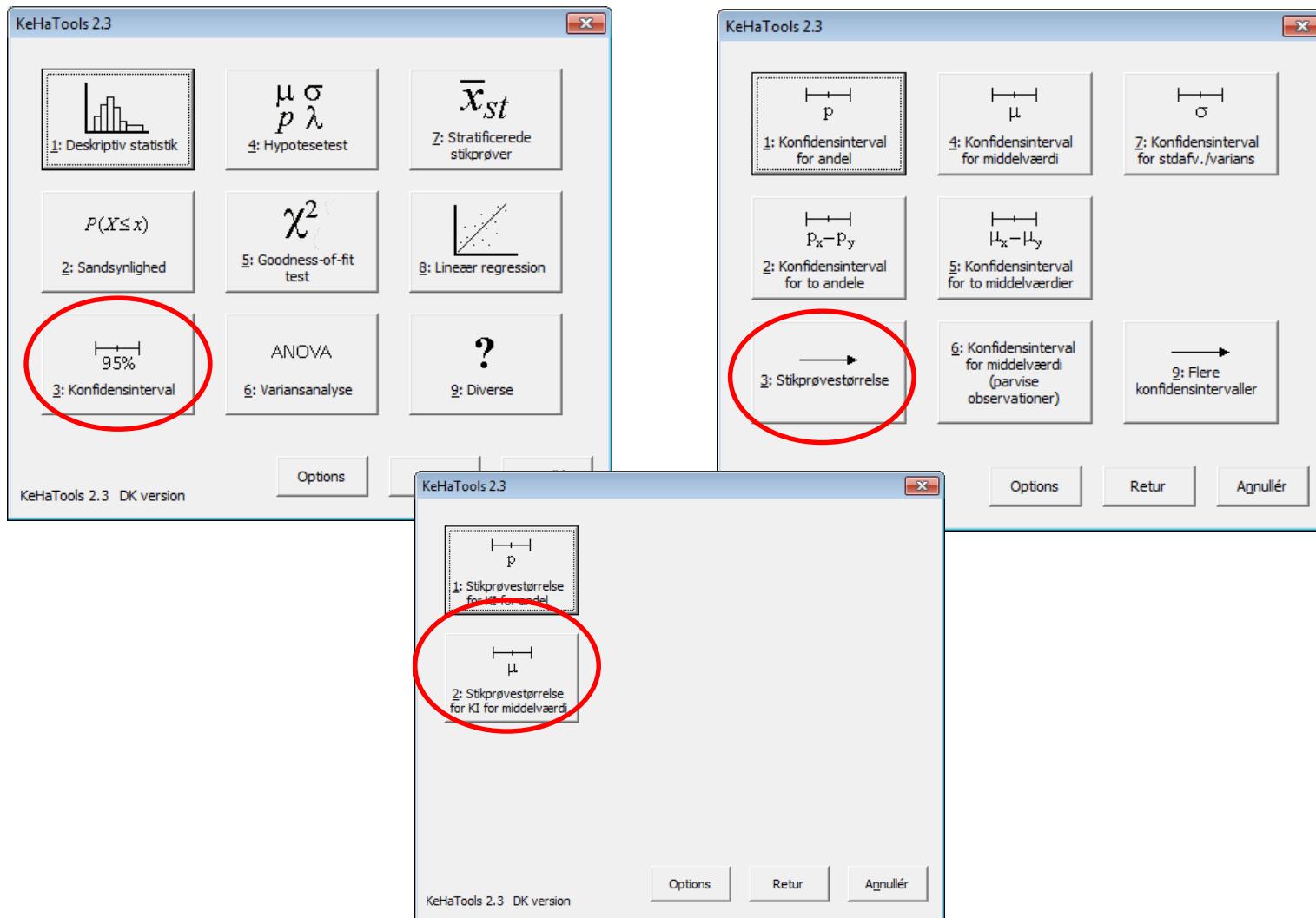
# Eksempel 4.1 - III

The screenshot shows a Microsoft Excel spreadsheet titled "GS\_Data.xlsx". The ribbon menu is visible at the top, and the formula bar shows the formula  $=C4+TINV(1-C6;C3-1)$ . The spreadsheet contains the following data:

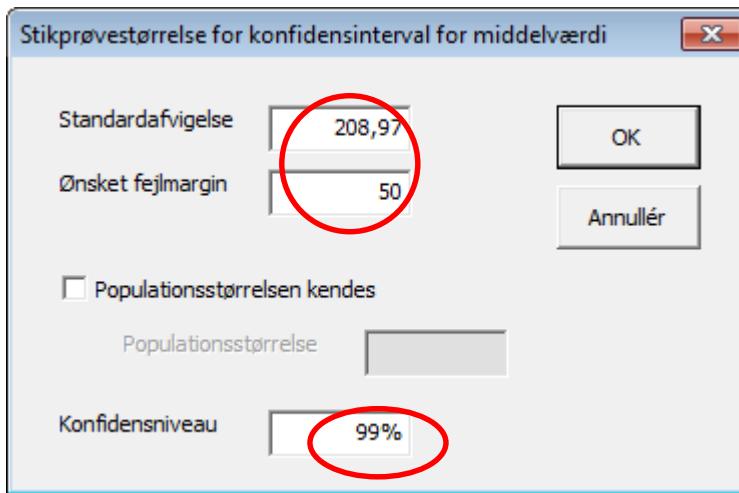
	A	B	C	D	E
1	Konfidensinterval for middelværdi (t-fordeling)				
2					
3	Stikprøvestørrelse		20		
4	Stikprøvegennemsnit		749,55		
5	Standardafvigelse		208,969		
6	Konfidensniveau		99%		
7					
8	Resultat				
9	Nedre grænse		615,8674		
10	Øvre grænse		883,2326		
11					
12					
13					
14					

The cell containing the value 883,2326 is highlighted with a red circle.

# Eksempel 4.2 - I



# Eksempel 4.2 - II

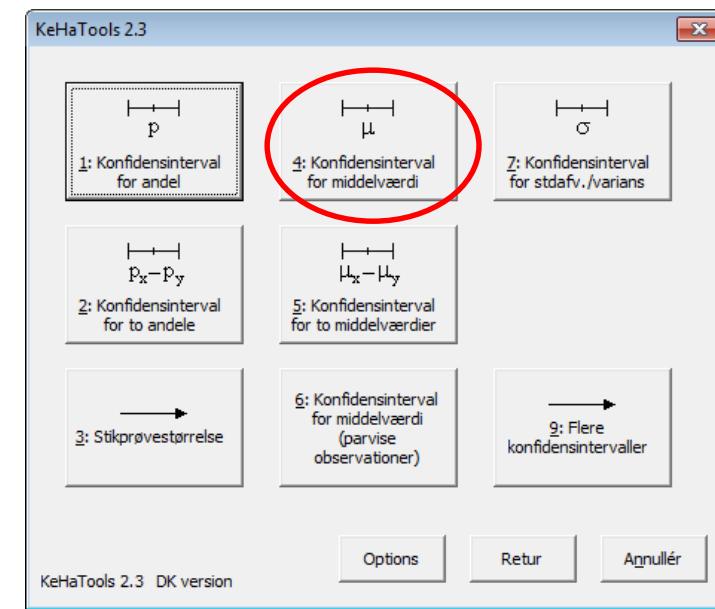
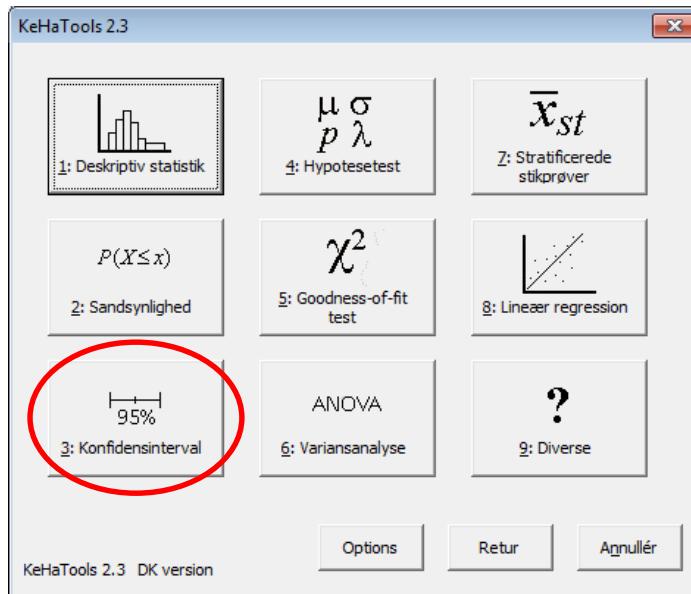


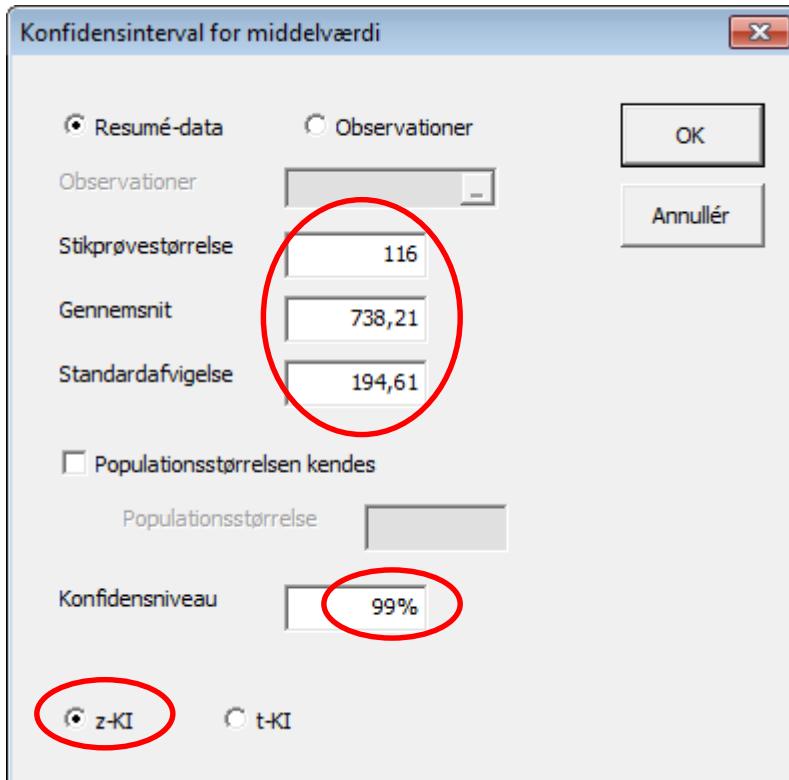
The spreadsheet shows the following data:

	A	B	C	D	E
1	Stikprøvestørrelse for konfidensinterval for middelværdi				
2					
3	Standardafvigelse		208,97		
4	Ønsket fejlmargin		50		
5	Konfidensniveau		99%		
6					
7	Resultat				
8	Stikprøvestørrelse		116		
9					
10					
11					
12					
13					
14					

The cell C8 contains the formula =AFRUND.LOFT((

# Eksempel 4.3 - I



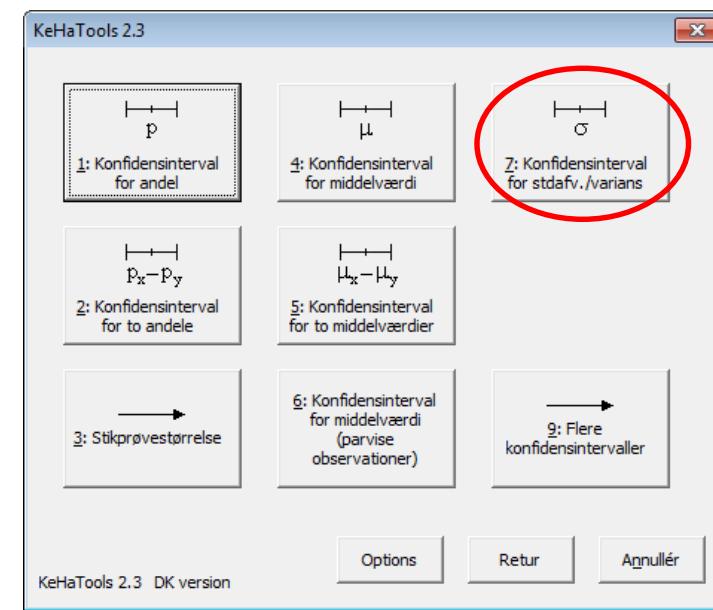
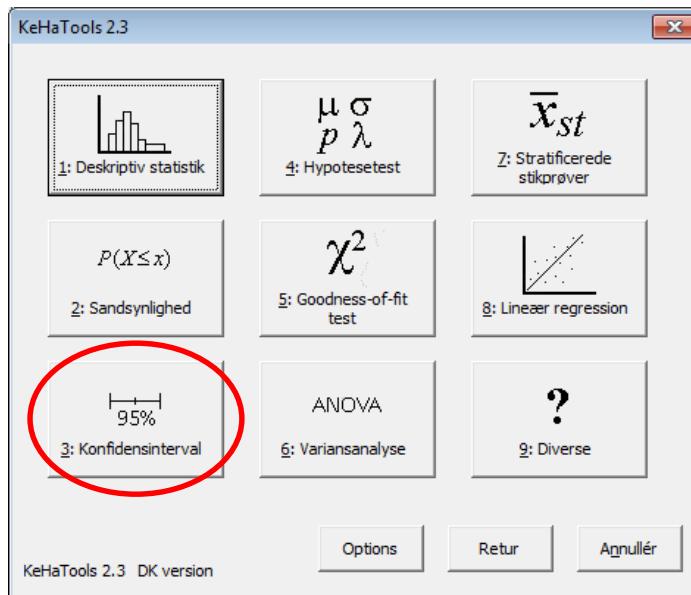


# Eksempel 4.3 - II

The Excel spreadsheet displays the following data:

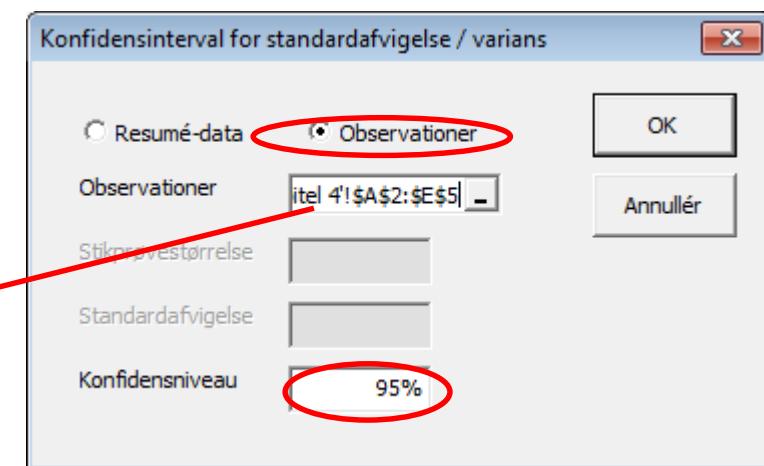
Resultat	Værdi
Nedre grænse	691,6671
Øvre grænse	784,7529

# Eksempel 4.4 - I



# Eksempel 4.4 - II

The screenshot shows a Microsoft Excel spreadsheet titled 'GS\_Data.xlsx'. The data is organized into columns A through E. The first row contains the header 'Eksempel 4.1'. The subsequent four rows contain numerical values: Row 2: 723, 911, 726, 670, 696; Row 3: 729, 775, 767, 378, 637; Row 4: 839, 1067, 913, 1081, 383; Row 5: 286, 840, 865, 896, 809. A red oval highlights the entire data range from A1 to E5.



# Eksempel 4.4 - III

GS\_Data.xlsx - Microsoft Excel

Filer Startside Indsæt Sidelayout Formler Data Gennemse Vis Udvikler Tilføjelsesp ? X

Hent eksterne data Opdater alle Forbindelser Sorter Filtrer Dataværktøjer Disposition Problemløsere Dataanalyse KeHaTools

Sorter og filtrer Analyse KeHaTools

C14 =KVROD(C11)

1	<b>Konfidensinterval for standardafvigelse</b>	
2		
3	Stikprøvestørrelse	20
4	Standardafvigelse	208,969
5	Konfidensniveau	95%
6		
7		
8	<b>Resultat</b>	
9	<b>Konfidensinterval for varians</b>	
10	Nedre grænse	25255,23
11	Øvre grænse	93155,72
12	<b>Konfidensinterval for standardafvigelse</b>	
13	Nedre grænse	158,9189
14	Øvre grænse	305,2142
15		
16		

Kapitel 1 Kapitel 2 Ark5 Kapitel 4 Kapitel 6 III Klar

100% +

A B C D E F G H I

1 Konfidensinterval for standardafvigelse

2

3 Stikprøvestørrelse 20

4 Standardafvigelse 208,969

5 Konfidensniveau 95%

6

7

8 Resultat

9 Konfidensinterval for varians

10 Nedre grænse 25255,23

11 Øvre grænse 93155,72

12 Konfidensinterval for standardafvigelse

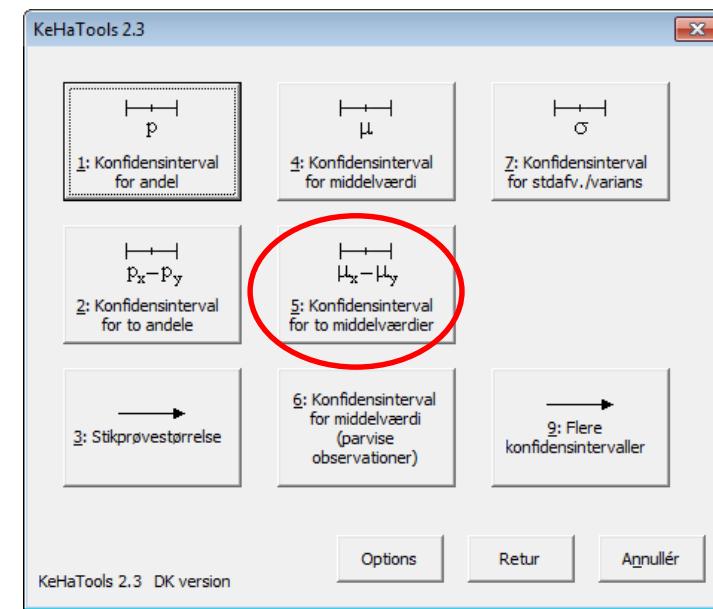
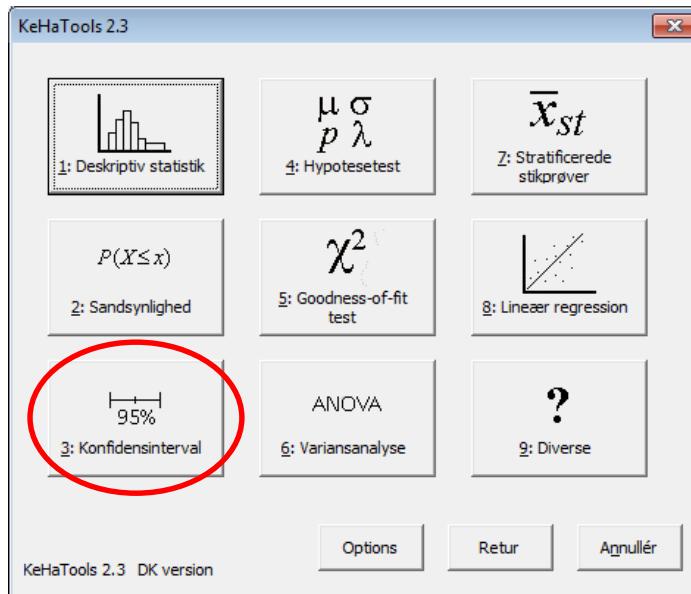
13 Nedre grænse 158,9189

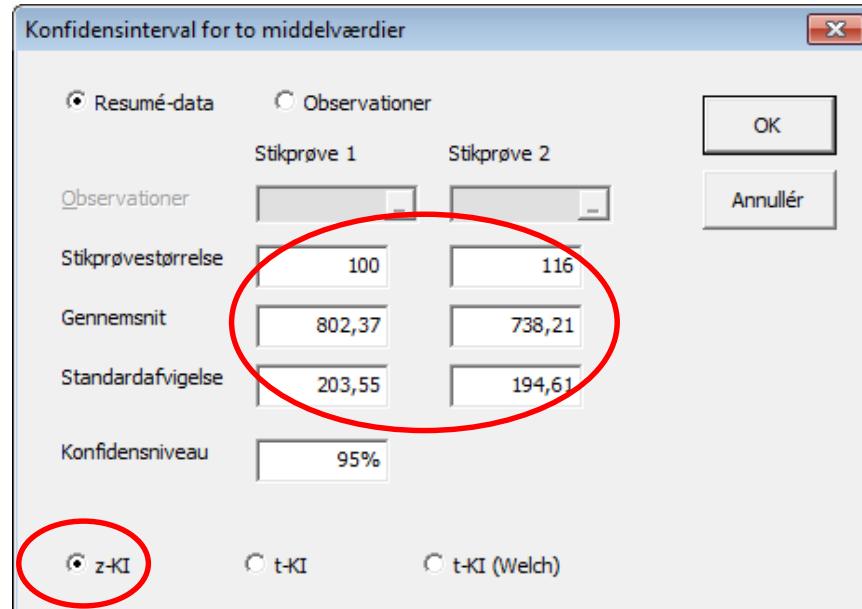
14 Øvre grænse 305,2142

15

16

# Eksempel 4.5 - I





GS\_Data.xlsx - Microsoft Excel

Filer Starts Indsæ Sidelæ Forml Data Genn Vis Udvik Tilføjelse ? X

Hent eksterne data Opdater alle Forbindelser Sorter og filtrer Data værktøjer Disposition Analyse KeHaTools KeHaTools

C11 f<sub>x</sub> =(C5-D5)+STANDARDNORMINV(1-(

A	B	C	D	E	F	G
1	Konfidensinterval for to middelværdier (z-fordeling)					
2						
3		Stikprøve	Stikprøve 2			
4	Stikprøvestørrelse	100	116			
5	Stikprøvegennemsnit	802,37	738,21			
6	Standardafvigelse	203,55	194,61			
7	Konfidensniveau	95%				
8						
9	Resultat					
10	Nedre grænse	10,81376				
11	Øvre grænse	117,5062				
12						

Kapitel 1 Kapitel 2 Ark6 Ark5 Klar 100% +