



AVERAGES, MEDIANS, & PERCENTS TABLE EXERCISE

August 2013

Questions or Comments?
NCES.info@rti.org

<http://nces.ed.gov/datalab>

YOUR CHALLENGE

1) Create a table in PowerStats that answers the following research questions:

- What percent of 2007–08 graduating college seniors with remedial coursetaking information took at least one remedial course during college?
- Among those indicated as taking at least one remedial course, what was the median number of remedial courses taken?
- Did the percentage taking at least one remedial course and the median number of remedial courses taken vary by age group as of December 31, 2007?

2) Check your table against the included answer table.

3) Compare the steps you took to create your table with the steps taken to create the included answer table.

READY FOR THE ANSWER TABLE?

Have you created your table?

Do not turn the page until you are ready to see the answer table.

ANSWER TABLE

Your initial table output will look like this.

To explore whether differences by age group are statistically significant, click *Estimates and Standard Errors* and conduct t-tests or click *Estimates and Confidence Intervals* and check for non-overlapping confidence intervals.

Graduating college seniors in 2008, followed through 2009 (BB09)

VIEW

- Estimates Only
- Estimates and Standard Errors**
- Estimates and Confidence Intervals
- Printer-Friendly Version

SAVE

- Save to My Tables
- Save to My Variables
- Save at NCES and Send Me the URL
- Download as CSV
- Download for Excel
- Download as PDF
- Download Table Specifications

SHARE

- Post My Table to User Tables
- Email to a Friend

TABLE

T-Test Tool Edit Table Create New Table

Change Weight Edit Title

Transcript: Remedial courses: # taken with (percent > 0), median>0 Transcript: Remedial courses: # taken by Age group as of 12/31/07.

	Transcript: Remedial courses: # taken (%>0)	Transcript: Remedial courses: # taken (Median>0)
Estimates		
Total	26.4	1.0
Age group as of 12/31/07		
15-23	22.2	1.0
24-29	33.4	1.0
30 or older	36.8	1.0

^ Standard error of quantile, as estimated by Woodruff method, is zero. Use caution in hypothesis testing.

The names of the variables used in this table are: QETOTR and AGEGROUP. The variable names are unique identifiers. To locate these variables, enter the variable name in the search box.

The weight variable used in this table is WTC000.

Source: U.S. Department of Education, National Center for Education Statistics, B&B: 09 Baccalaureate and Beyond Longitudinal Study

Computation by NCES PowerStats on 7/22/2013.

STEPS TO CREATE THE ANSWER TABLE

Step 1: Log in

Step 2: Access the create new table feature

Step 3: Choose a group of students (dataset)

Step 4: Choose a type of table

Step 5: Select column variables

Step 6: Select a row variable

Step 7: Run your table

1. LOG IN

INSTRUCTIONS

1. Go to the NCES DataLab page:
<http://nces.ed.gov/datalab/>
2. Click the *PowerStats* icon or
Go under the *PowerStats* icon.

The screenshot shows a web browser window with the address bar containing nces.ed.gov/datalab/. The page header includes the logo for the Institute of Education Sciences (IES) and the National Center for Education Statistics, along with a search bar and navigation links: Publications & Products, Surveys & Programs, Data & Tools, Fast Facts, School Search, News & Events, and About Us.

The main content area is titled "DATALAB" and "Postsecondary & Pre-Elementary Education Data". It features four main sections:

- PowerStats:** A section with a red-bordered icon and a "GO" button. The text below the icon reads: "Create, save and share tables and regressions, using 15 NCES postsecondary survey datasets and 1 pre-elementary education dataset."
- College & Career Tables Library:** A section with a grid icon and a "GO" button. The text below the icon reads: "Browse through 5,000+ tables from NCES' postsecondary publications that cover a comprehensive range of topics."
- QuickStats:** A section with a "QuickStats" logo and a "GO" button. The text below the logo reads: "Quickly create simple tables using the most frequently used variables from recent postsecondary and pre-elementary survey data."
- IPEDS ANALYTICS: Delta Cost Project Database:** A section with a bar chart icon and a "GO" button. The text below the icon reads: "Download IPEDS institutional data from 1986-87 to 2009-10 that have been translated for longitudinal analysis."

On the right side of the page, there is a "What's New" section with two entries dated 6/17/2013, a "Questions?" section with the contact email nces.info@mprinc.com, and a "Codebooks" section with two dropdown menus for "View by subject" and "View by variable name", each with a "GO" button.

The footer contains the following information:

- U.S. Department of Education
Institute of Education Sciences
National Center for Education Statistics
- [NewsFlash](#) | [Staff](#) | [Contact](#) | [Help](#) | [RSS](#) | [Privacy Policy](#)
[Statistical Standards](#) | [FedStats.gov](#) | [ChildStats.gov](#)
- INTERNATIONAL YEAR OF STATISTICS

1. LOG IN, CONTINUED

INSTRUCTIONS

3. Enter your user e-mail and password.
4. Read the usage agreement.
5. Check *I agree to the terms above.*
6. Click *Login*.

The screenshot shows the DATALAB interface with a 'PowerStats User Login' dialog box overlaid. The dialog box has a title bar with 'PowerStats User Login' and a close button. It contains the following elements:

- A 'Create new account' link.
- A 'User E-Mail' field containing 'abc@xyz.edu'.
- A 'Password' field with masked characters.
- An 'NCES DATA USAGE AGREEMENT' section with a scroll bar, containing the text: 'Under law, public use data collected and distributed by the National Center for Education Statistics (NCES) may be used only for statistical purposes. Any effort to determine the identity of any reported case by'.
- A checkbox labeled 'I agree to the terms above.' which is checked.
- 'Login' and 'Cancel' buttons.
- A 'Forgot your password?' link.

The background interface shows the 'PowerStats' logo, a 'QuickStats' logo, and various data search options like 'View by subject' and 'View by variable name' with 'GO' buttons.

2. ACCESS THE CREATE NEW TABLE FEATURE

INSTRUCTIONS

1. Click the *Table* icon under *Create New*.

The screenshot displays the PowerStats web application interface. At the top left is the PowerStats logo. At the top right, there is a 'QuickRetrieve' section with a text input field for 'Enter table number:' and a 'GO' button. Below this is a 'DataLab | Log out' link. The main content area is divided into four quadrants by dashed lines. The top-left quadrant is titled 'CREATE NEW' and contains three circular icons: 'TABLE' (a grid icon, highlighted with a red border), 'REGRESSION' (a scatter plot icon), and 'MY LIBRARY' (a stack of documents icon). The top-right quadrant is titled 'USE EXISTING FILES' and contains three circular icons: 'IMPORT FILE' (a document with an arrow icon) and 'LAUNCH BATCH PROCESSOR' (a fan of documents with an arrow icon). The bottom-left quadrant is titled 'GETTING STARTED' and contains two sections: 'LEARN BY DOING (PDF)' with a list of links (Tables, Linear Regressions, Logistic Regressions, My Library, Import Files, Batch Processor) and 'TECHNICAL DOCUMENTS (PDF)' with a link for 'Calculating Variance Inflation Factor'. The bottom-right quadrant is titled 'RECENT WORK' and contains a list of recent work items, including 'Job 2009: Employment status by Gender, Race/ethnicity, Parents' highes...', and a 'View more' link.

PowerStats

QuickRetrieve
Enter table number: **GO**

DataLab | Log out

CREATE NEW

TABLE

REGRESSION

MY LIBRARY

IMPORT FILE

LAUNCH BATCH PROCESSOR

GETTING STARTED

LEARN BY DOING (PDF)

- Tables (709KB)
- Linear Regressions (1.23MB)
- Logistic Regressions (1.10MB)
- My Library (1.51MB)
- Import Files (313KB)
- Batch Processor (289KB)

TECHNICAL DOCUMENTS (PDF)

- Calculating Variance Inflation Factor (725KB)

RECENT WORK

- Job 2009: Employment status by Gender, Race/ethnicity, Parents' highes...
- Cumulative persistence and attainment anywhere 2003-04 by Degree progr...
- Cumulative persistence and attainment anywhere 2008-09 by Degree progr...
- Cumulative persistence and attainment anywhere 2008-09 by Degree progr...
- Cumulative persistence and attainment anywhere 2008-09 by Degree progr...

[View more](#)

3. CHOOSE A GROUP OF STUDENTS (DATASET)

INSTRUCTIONS

1. Click *Graduating college seniors* or drag it to the *Group* box.

The *Group* box is updated with your selection.

Information about the dataset and different cohorts appear in the *Work Space*.

2. At the bottom of the column labeled “received their bachelor’s degrees in 2007-08 and followed for 1 year” click *Select*.

TIP

Use the *QuickSelect by dataset name* option if you are already familiar with NCES datasets.

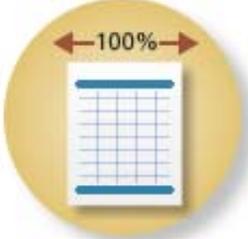
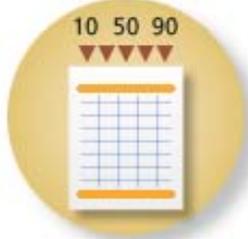
The screenshot shows the PowerStats interface. On the left is the 'GROUP' sidebar with a tree view of categories: POSTSECONDARY, PRE-ELEMENTARY, and Students. Under POSTSECONDARY, 'Graduating college seniors' is selected. The 'WORK SPACE' area displays a table with three columns representing different student cohorts. The first column, 'received their bachelor's degrees in 2007-08 and followed for 1 year', is selected. Each column contains details about the cohort, including issues that can be addressed, approximate number of respondents, and study name. The 'Select' button at the bottom of the first column is highlighted.

received their bachelor's degrees in 2007-08 and followed for 1 year.	received their bachelor's degrees in 1992-93 and followed for 10 years.	received their bachelor's degrees in 1999-00 and followed for 1 year.
Issues that can be addressed include: <ul style="list-style-type: none">• Outcomes for bachelor's degree recipients• Graduate and professional program access• Labor market experiences• Rates of return on investment in education	Issues that can be addressed include: <ul style="list-style-type: none">• Outcomes for bachelor's degree recipients• Graduate and professional program access• Labor market experiences• Rates of return on investment in education	Issues that can be addressed include: <ul style="list-style-type: none">• Outcomes for bachelor's degree recipients• Graduate and professional program access• Labor market experiences• Rates of return on investment in education
Approximate number of respondents: 15,000	Approximate number of respondents: 11,200	Approximate number of respondents: 10,000
Study name: Baccalaureate and Beyond: 2008-2009 Visit study website View technical information Methodology report coming soon View all variable information, by subject View all variable information, by variable name	Study name: Baccalaureate and Beyond: 1993-2003 Visit study website View technical information View methodology report View all variable information, by subject View all variable information, by variable name	Study name: Baccalaureate and Beyond: 2000-2001 Visit study website View technical information View methodology report View all variable information, by subject View all variable information, by variable name
View example tables	View example tables	View example tables
Select	Select	Select

4. CHOOSE A TYPE OF TABLE

INSTRUCTIONS

1. Click the *Averages, Medians, & Percents* icon.

 <p>PERCENTAGE DISTRIBUTION</p>	 <p>AVERAGES, MEDIANS, & PERCENTS</p>	 <p>CENTILES</p>
<p>Generates percentage of population in each category of a variable, displayed in columns.</p>	<p>Computes any of three statistics (averages, medians, or percentages) for your selected variables, displayed in columns.</p>	<p>Produces values of a <u>continuous variable</u> at centiles, displayed in columns.</p>

5. SELECT FIRST COLUMN VARIABLE

TIP

The dependent variable in your research question should be added as a column variable. Independent variables should be added as row variables.

INSTRUCTIONS

1. Type “remedial taken” in the *Find Variables* box and click *Go*.
2. Under *Search Result*, click *Transcript: Remedial courses: # taken*.

TIP

Transcript: Remedial courses: # taken can also be found by:

- Clicking on *Frequently Used Variables* and then clicking on the *Transcript* heading, or
- Clicking on *All Variables* and then clicking on the *Transcript: Remedial or ESL* heading

The screenshot shows the PowerStats interface for the dataset "Graduating college seniors in 2008, followed through 2009 (BB09)". The "FIND VARIABLES" search box contains the text "remedial taken" and is highlighted with a red box. Below the search box, the "Search result" section is also highlighted with a red box, showing the variable "Transcript: Remedial courses: # taken".

The interface includes a sidebar with variable categories: ALL VARIABLES, MY VARIABLES, and FREQUENTLY USED VARIABLES. The "FREQUENTLY USED VARIABLES" section is expanded to show "Search result" and "Transcript: Remedial courses: # taken".

The main workspace shows a table structure with three columns and a subtable. The subtable is titled "Working Title — Column variable by row variable." and has four columns: "Column Var 1", "Column Var 2", and "Column Var 3". The subtable contains rows for "Total", "Row var label", "Category", and "Total".

5. SELECT FIRST COLUMN VARIABLE: VARIABLE INFORMATION

INSTRUCTIONS

3. The Variable Information screen, which includes the three tabs shown below and to the right, appears. Click on the *View descriptive statistics* tab to see if some respondents are missing remedial coursetaking information. Click on the *Get more info* tab and check the *Applies to* in order to specify your columns correctly.

4. Click *Column* under the *Use Variable* tab to select this variable as a column.

TIP

You can also select *Transcript: Remedial courses: # taken* as your column variable by dragging it to the *Column* box in the *Work Space*. The Variable Information screen and its tabs will not appear using this method.

Use variable tab

View descriptive statistics tab

Get more info tab

5. SELECT FIRST COLUMN VARIABLE: OPTIONS

INSTRUCTIONS

5. This *Options* screen appears.
To answer the first research question click *Use as a percent greater than...*
6. Then enter 0 in the *Percent greater than* box and click *Save*.

TIP

Do not check the box next to *Missing* because the research question indicates that you should only include those with remedial coursetaking information in your analysis.



OPTIONS X CLOSE

USE AS AVERAGE ☐

Transcript: Remedial courses: # taken

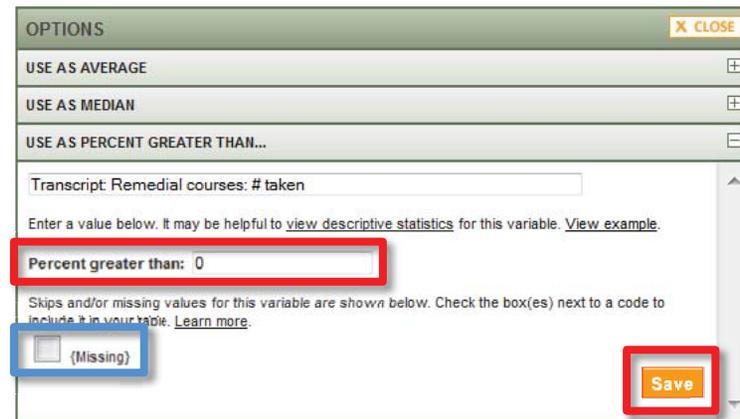
With zeros

Without zeros

OK

USE AS MEDIAN ☐

USE AS PERCENT GREATER THAN... ☐



OPTIONS X CLOSE

USE AS AVERAGE ☐

USE AS MEDIAN ☐

USE AS PERCENT GREATER THAN...

Transcript: Remedial courses: # taken

Enter a value below. It may be helpful to [view descriptive statistics](#) for this variable. [View example](#).

Percent greater than: 0

Skips and/or missing values for this variable are shown below. Check the box(es) next to a code to include it in your table. [Learn more](#).

(Missing)

Save

5. SELECT SECOND COLUMN VARIABLE

INSTRUCTIONS

7. To answer the second research question, under *Search Result*, drag *Transcript: Remedial courses: # taken* to the *Column 2* box.

TIP

You could also click *Transcript: Remedial courses: # taken*. The Variable Information screen and its tabs would then appear. In the Use variable tab, click *Column*.

The screenshot shows the PowerStats interface for the study "Graduating college seniors in 2008, followed through 2009 (BB09)". The left sidebar lists various variable categories, with "Search result" selected. Under "Search result", the variable "Transcript: Remedial courses: # taken" is highlighted with a red box. The main workspace shows a table with three columns: "Column 1" (containing "Transcript: Remedial courses: # taken"), "Column 2" (highlighted with a red box and containing "Optional. Drag desired variable here"), and "Column 3" (containing "Optional. Drag desired variable here"). Below the table, there is a "Rows" section with a "Working Title — Column variable by row variable." table. This table has a "Percentage > 0" column and rows for "Total", "Row var label", and "Category". At the bottom, there are "Filter 1" and "Filter 2" sections, each with "Optional. Drag desired variable here" and a question mark icon.

5. SELECT SECOND COLUMN VARIABLE: OPTIONS

INSTRUCTIONS

8. This *Options* screen appears. This time, pick the *Use as median* option.

9. Then choose the *Without zeros* option and click *OK*.

TIP

Choose *Without zeros* so that the median is calculated based on those taking at least one remedial course, which is what the research question asks.

Choosing *With zeros* would cause the median to include those taking no remedial courses.



5. SELECT COLUMN VARIABLES

TIP

The columns in the *Work Space* display the column variables and indicate the column options selected.

Column 1	Column 2	Column 3
Transcript: Remedial courses: # taken Clear Edit	Transcript: Remedial courses: # taken Clear Edit	Optional. Drag desired variable here
Subtable		Optional. Drag desired variable here
Rows	Working Title — Column variable by row variable.	
Drag desired variable here	Percentage>0	Median>0
Optional. Drag desired variable here	Total	% #
Optional. Drag desired variable here	Row var label	
	Category	% #
	Category	% #
	Total	% #
	Row var label	
	Category	% #
	Category	% #
Add Variable	Filter 1	Optional. Drag desired variable here
Reorder Variables	Filter 2	Optional. Drag desired variable here
	Add Filter	

6. SELECT A ROW VARIABLE

TIP

Independent variables in your research question should be added as row variables. (The dependent variable should be added as a column variable.)

INSTRUCTIONS

1. Type "age" in the *Find Variables* box and click *Go*.
2. Under *Search Result*, drag *Age group as of 12/31/2007* to the *Rows* box.

TIP

The research question asks that you use *Age group* rather than *Age as of 12/31/07*. Using *Age* would require you to make your own age group categories. To learn how to create your own categories see the Centiles training module and Centiles exercise.

Age group as of 12/31/2007 can also be found by clicking on *All Variables* and then clicking on the *Demographics* heading.

The screenshot shows the PowerStats interface for the study "Graduating college seniors in 2008, followed through 2009 (BB09)". The "FIND VARIABLES" search box contains the text "age" and is highlighted with a red box. Below the search box, the "Search result" section is also highlighted with a red box, showing a list of variables. The variable "Age group as of 12/31/07" is highlighted with a red box. The "Rows" box on the right side of the interface is empty, indicating that the selected variable has not yet been added. The "Columns" section shows three columns: "Column 1" (Transcript: Remedial courses: # taken), "Column 2" (Transcript: Remedial courses: # taken), and "Column 3" (Optional. Drag desired variable here). The "Subtable" section shows a table with columns for "Percentage>0" and "Median>0".

PowerStats

My Preferences | PowerStats Home | DataLab | Log out

Graduating college seniors in 2008, followed through 2009 (BB09)

FIND VARIABLES age GO

WORK SPACE >> Averages, Medians, & Percents

Change Clear All Create Table

Download Table Specifications

Add Column Variable Reorder Column Variables

Column 1	Column 2	Column 3
Transcript: Remedial courses: # taken	Transcript: Remedial courses: # taken	Optional. Drag desired variable here
Clear Edit	Clear Edit	

Subtable

Optional. Drag desired variable here

Rows

Working Title — Column variable by row variable.

	Percentage>0	Median>0
Total	%	#
Row var label		
Category	%	#
Category	%	#
Total	%	#
Row var label		
Category	%	#
Category	%	#

Optional. Drag desired variable here

Optional. Drag desired variable here

Optional. Drag desired variable here

Filter 1

Filter 2

Add Variable Reorder Variables Add Filter

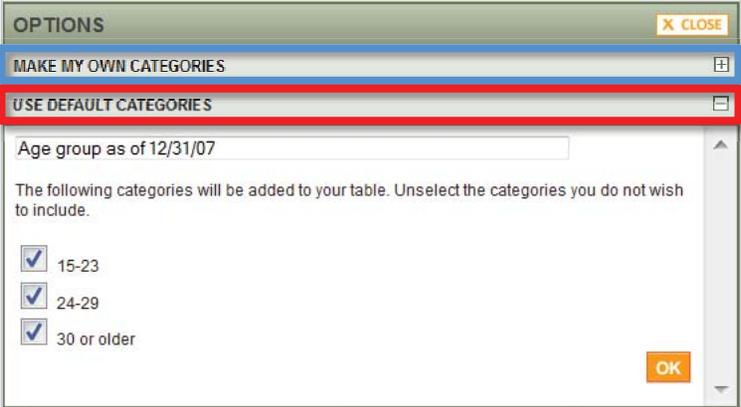
6. SELECT A ROW VARIABLE: OPTIONS

INSTRUCTIONS

3. The Options screen appears.
Under *Use Default Categories*, click *OK*.

TIP

For more information on how to use *Make My Own Categories* see the Centile Table training module and the Centile Table exercise.



OPTIONS X CLOSE

MAKE MY OWN CATEGORIES +

USE DEFAULT CATEGORIES -

Age group as of 12/31/07

The following categories will be added to your table. Unselect the categories you do not wish to include.

- 15-23
- 24-29
- 30 or older

OK

6. SELECT A ROW VARIABLE

TIP

The *Work Space* displays the row variable selected.

(The % placeholders in the *Work Space* will be replaced with calculations when your final table is generated.)

Column 1	Column 2	Column 3
Transcript: Remedial courses: # taken	Transcript: Remedial courses: # taken	Optional. Drag desired variable here
Clear Edit	Clear Edit	
Subtable		Optional. Drag desired variable here
Rows Working Title — Transcript: Remedial courses: # taken with (percent > 0), median>0 Transcript: Remedial courses: # taken by Age group as of 12/31/07.		
Age group as of 12/31/07	Percentage>0	Median>0
Total	%	#
Age group as of 12/31/07		
15-23	%	#
24-29	%	#
30 or older	%	#
Clear Edit		
Optional. Drag desired variable here		
Optional. Drag desired variable here		
+ Add Variable	Filter 1	Optional. Drag desired variable here ?
↔ Reorder Variables	Filter 2	Optional. Drag desired variable here ?
	+ Add Filter	

7. RUN YOUR TABLE

INSTRUCTIONS

1. Click *Create Table*.

WORK SPACE >> Averages, Medians, & Percents

Change Clear All **Create Table**

Download Table Specifications
Add Column Variable Reorder Column Variables

Column 1	Column 2	Column 3
Transcript: Remedial courses: # taken	Transcript: Remedial courses: # taken	Optional. Drag desired variable here
Clear Edit	Clear Edit	

Subtable Optional. Drag desired variable here

Rows

Age group as of 12/31/07

Clear Edit

Optional. Drag desired variable here

Optional. Drag desired variable here

Working Title — Transcript: Remedial courses: # taken with (percent > 0), median>0
Transcript: Remedial courses: # taken by Age group as of 12/31/07.

	Percentage>0	Median>0
Total	%	#
Age group as of 12/31/07		
15-23	%	#
24-29	%	#
30 or older	%	#

Filter 1 Optional. Drag desired variable here ?

Filter 2 Optional. Drag desired variable here ?

Add Variable Reorder Variables Add Filter

7. RUN YOUR TABLE: CHOOSE A WEIGHT

INSTRUCTIONS

2. Choose the suggested weight by clicking **OK**. This weight is based on those who have transcript data, (the source of our remedial coursetaking variable), and interview data (the source of our age group variable).

TIP

You can find out more information about weights by consulting the methodology report of the study you are using.

WORK SPACE >> Averages, Medians, & Percents

Change Clear All Create Table

Download Table Specifications

Add Column Variable Reorder Column Variables

Column 1	Column 2	Column 3
Transcript: Remedial courses: # taken	Transcript: Remedial courses: # taken	Optional. Drag desired variable here
Clear Edit	Clear Edit	

Subtable

Rows

Age group as of 12/31/07

Clear Edit

Optional.
Drag desired variable here

Optional.
Drag desired variable here

Add Variable Reorder Variables

Filter 1 Filter 2 Add Filter

CHOOSE WEIGHT PRINT SCREEN X CLOSE

Based on the variables you selected, we recommend the weight below. Learn more about [Weight Recommendations](#).

Students who responded to the 2009 follow-up interview and for whom the bachelor's degree-granting institution provided an undergraduate transcript. Includes approximately 14,000 graduates. (WTC000)

OK

Other weight [Collapse]

Students who received a bachelor's degree between July 2007 and June 2008 and responded to the 2009 follow-up interview. Includes approximately 15,000 graduates. (WTA000)

**** This is the recommended weight for most tables. ****

Select

Students for whom the bachelor's degree-granting institution provided an undergraduate transcript. Includes approximately 16,100 graduates. Use weight if you select only transcript variables. (WTB000)

Select

YOUR TABLE

Your initial table output will look like this.

To explore whether differences by age group are statistically significant, click *Estimates and Standard Errors* and conduct t-tests or click *Estimates and Confidence Intervals* and check for non-overlapping confidence intervals.

Graduating college seniors in 2008, followed through 2009 (BB09)

VIEW

- Estimates Only
- Estimates and Standard Errors**
- Estimates and Confidence Intervals
- Printer-Friendly Version

SAVE

- Save to My Tables
- Save to My Variables
- Save at NCES and Send Me the URL
- Download as CSV
- Download for Excel
- Download as PDF
- Download Table Specifications

SHARE

- Post My Table to User Tables
- Email to a Friend

TABLE

T-Test Tool Edit Table Create New Table

Change Weight Edit Title

Transcript: Remedial courses: # taken with (percent > 0), median>0 Transcript: Remedial courses: # taken by Age group as of 12/31/07.

	Transcript: Remedial courses: # taken (%>0)	Transcript: Remedial courses: # taken (Median>0)
Estimates		
Total	26.4	1.0
Age group as of 12/31/07		
15-23	22.2	1.0
24-29	33.4	1.0
30 or older	36.8	1.0

^ Standard error of quantile, as estimated by Woodruff method, is zero. Use caution in hypothesis testing.

The names of the variables used in this table are: QETOTR and AGEGROUP. The variable names are unique identifiers. To locate these variables, enter the variable name in the search box.

The weight variable used in this table is WTC000.

Source: U.S. Department of Education, National Center for Education Statistics, B&B: 09 Baccalaureate and Beyond Longitudinal Study

Computation by NCES PowerStats on 7/22/2013.