

# Scoring a Touchdown With Football and Math

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T<sup>3</sup> Regional Instructor

The presenter will:

- Show how to put data in lists and make visual representations of the data including histograms and box plots
- Discuss measure of center and measures of spread and how you can use those to analyze data
- Explore outliers and how they affect the data set
- Use this activity to engage students with their own chosen data sets, as they can analyze and compare player attributes from different teams, positions, and even students in their own classroom.

## Motivation and discussion ideas:

- To find real data that students can use to make many statistical comparisons. Make effective use of different views of the data. Also to come up with discussion and discovery query's.
- In today's world of sports, data analytics is playing an ever increasing role in decision making. Organizations have to make decisions about players and they are looking for ways to streamline that process.
- Could there be physical traits that All-Pro players possess that would allow for a more focused player search?
- What are the trends in certain positions?
- Differences in players speeds (Drafted vs. Undrafted)
- is there a difference in the teams at the top of the division and at the bottom? What might be the difference? Speed? Size?
- Discuss BMI data of players.

Data Resource:



<https://www.pro-football-reference.com/>

This site will allow you do find all kinds of football stats and history of the NFL.

# Data Collection

Steps:

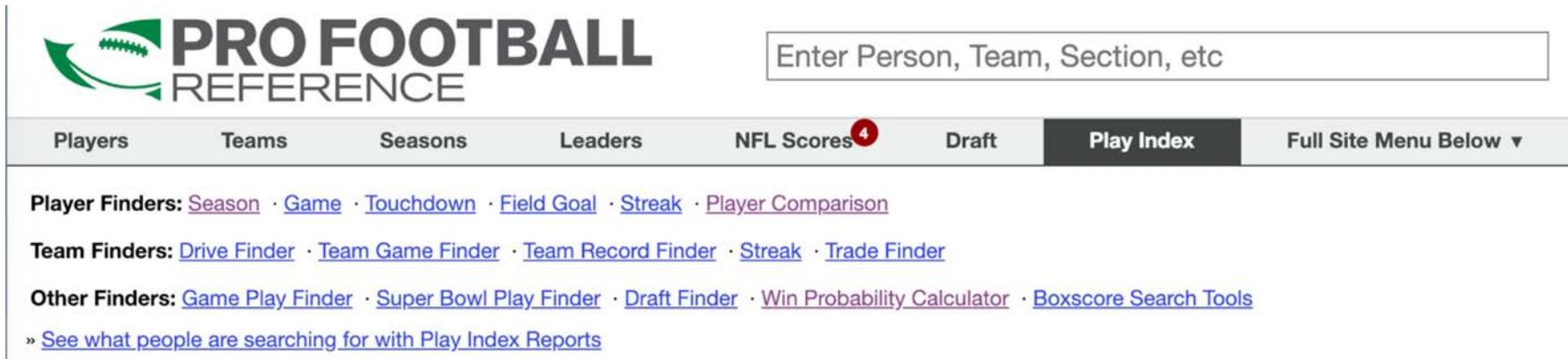
- You could have students search out teams and compare teams

Use this link to access a player sorted data search.

- [https://www.pro-football-reference.com/play-index/psl\\_finder.cgi](https://www.pro-football-reference.com/play-index/psl_finder.cgi)
- Search through player seasons spanning from 1920 to today for single or combined seasons that match your criteria.

How to find the search page without the link:

From the home page, move your mouse over the PLAY INDEX tab and then choose SEASON from the Player Finder list.



The screenshot shows the top navigation bar of the Pro Football Reference website. On the left is the logo for Pro Football Reference, featuring a green football and the text "PRO FOOTBALL REFERENCE". To the right of the logo is a search box with the placeholder text "Enter Person, Team, Section, etc". Below the search box is a horizontal navigation menu with the following items: "Players", "Teams", "Seasons", "Leaders", "NFL Scores" (with a red notification bubble containing the number 4), "Draft", "Play Index" (which is highlighted in a dark grey box), and "Full Site Menu Below" with a downward arrow. Below the navigation menu, there are three sections of links:

- Player Finders:** [Season](#) · [Game](#) · [Touchdown](#) · [Field Goal](#) · [Streak](#) · [Player Comparison](#)
- Team Finders:** [Drive Finder](#) · [Team Game Finder](#) · [Team Record Finder](#) · [Streak](#) · [Trade Finder](#)
- Other Finders:** [Game Play Finder](#) · [Super Bowl Play Finder](#) · [Draft Finder](#) · [Win Probability Calculator](#) · [Boxscore Search Tools](#)

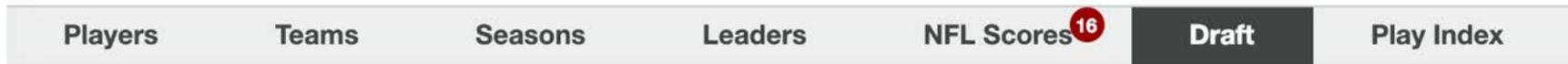
At the bottom of these sections is a link: » [See what people are searching for with Play Index Reports](#)

# Search Page:

<b>Years</b> 2018 to 2018 Any • Post-Merger • Current	<b>Year of player's career</b> First to Last	<b>Age on December 31</b> Any to Any Any • Teens • 20s • 30s • 40s	<b>Additional Criteria</b> Choose >= <input type="text"/> Choose >= <input type="text"/> Choose >= <input type="text"/> Choose >= <input type="text"/> 1.0 * Choose
<b>League</b> All Leagues	<b>Team</b> All Teams	<b>Is Active</b> <input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Either	<b>Sort By</b> Passing TD * Default sort order is descending <input type="checkbox"/> Use ascending order
<b>Draft</b> (further draft options below) <input type="radio"/> Drafted Only <input type="radio"/> Undrafted Only <input checked="" type="radio"/> Either Show Detailed Draft Options	<b>Hall of Fame</b> <input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Either	<b>Position(s) Notes</b> <input checked="" type="checkbox"/> QB <input checked="" type="checkbox"/> RB <input checked="" type="checkbox"/> WR <input checked="" type="checkbox"/> TE <input checked="" type="checkbox"/> E <input checked="" type="checkbox"/> T <input checked="" type="checkbox"/> G <input checked="" type="checkbox"/> C <input checked="" type="checkbox"/> OL <input checked="" type="checkbox"/> DT <input checked="" type="checkbox"/> DE <input checked="" type="checkbox"/> DL <input checked="" type="checkbox"/> ILB <input checked="" type="checkbox"/> OLB <input checked="" type="checkbox"/> LB <input checked="" type="checkbox"/> CB <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> DB <input checked="" type="checkbox"/> K <input checked="" type="checkbox"/> P All • Offense • Defense • Skill • Clear	<b>Get Results</b>

# Combine Results Data Search:

From the home page, choose draft and then choose Combine Results



**By Year:** [2018](#) · [2017](#) · [2016](#) · [2015](#) · [2014](#) · [2013](#) · [2012](#) · [2011](#) · ...

**By Franchises:** [Bears](#) · [Dolphins](#) · [Falcons](#) · [Eagles](#) · [Broncos](#) · [Lions](#) · [Cardinals](#) ...

**Draft Combine:** [2018](#) · [2017](#) · [2016](#) · [2015](#) · [2014](#) · [2013](#) · [2012](#) · [2011](#) · [2010](#) · ...

[All Draft Information](#) · [Draft Finder](#) · [Combine Results \(since 2000\)](#)

Click on the red text to pre-fill the form with various values

<b>Years</b> 2018 to 2018 Any · Current	<b>Height</b> in inches to	<b>Weight</b> in pounds to	<b>Additional Criteria</b> Choose one.. >= <input type="text"/> Choose one.. >= <input type="text"/>
<b>Position</b> <input checked="" type="checkbox"/> QB <input checked="" type="checkbox"/> WR <input checked="" type="checkbox"/> TE <input checked="" type="checkbox"/> RB <input checked="" type="checkbox"/> FB <input checked="" type="checkbox"/> OT <input checked="" type="checkbox"/> OG <input checked="" type="checkbox"/> C <input checked="" type="checkbox"/> DE <input checked="" type="checkbox"/> DT <input checked="" type="checkbox"/> EDGE <input checked="" type="checkbox"/> ILB <input checked="" type="checkbox"/> OLB <input checked="" type="checkbox"/> SS <input checked="" type="checkbox"/> FS <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> CB <input checked="" type="checkbox"/> LS <input checked="" type="checkbox"/> K <input checked="" type="checkbox"/> P All · Offense · Defense · Skill · Clear	<b>Draft Team</b> All Teams or Undrafted	<b>College</b> All Schools	<b>Sort By</b> Combine Year * Default sort order is descending <input type="checkbox"/> Use ascending order <b>Get Results</b>

# How to search and sort data:

Use the Player Finder search page:

The screenshot displays a search interface for a Player Finder. It is organized into several columns of filters:

- Years:** Set to 1970 to 1970. Includes links for Any, Post-Merger, and Current.
- League:** Set to All Leagues.
- Draft (further draft options below):** Radio buttons for Drafted Only, Undrafted Only, and Either (selected). Includes a link for Show Detailed Draft Options.
- Year of player's career:** Set to First to Last.
- Team:** Set to All Teams.
- Hall of Fame:** Radio buttons for Yes, No, and Either (selected).
- Age on December 31:** Set to Any to Any. Includes links for Any, Teens, 20s, 30s, and 40s.
- Is Active:** Radio buttons for Yes, No, and Either (selected).
- Position(s) Notes:** A grid of checkboxes for positions: QB, RB, WR, TE, E, T, G, C, OL, DT, DE, DL, ILB, OLB, LB, CB, S, DB, K, P. G, C, and OL are checked. Includes links for All, Offense, Defense, Skill, and Clear.
- Additional Criteria:** Fields for Height (inches), Weight (pounds), and BMI, each with a dropdown menu, a comparison operator (>=), and an input box. A multiplier of 1.0 is shown next to the BMI field.
- Sort By:** A dropdown menu set to Height (inches). Includes a note: \* Default sort order is descending and a checkbox for Use ascending order.

A green **Get Results** button is located at the bottom right of the search area.

This particular search chose only offensive linemen and specifically for the year 1970. Note: In the additional Criteria area I added height, weight and BMI.

Now after you click on Get Results you will have a list of 100 sorted by height (you can choose how you sort)

**Query Results** [Share & more](#) [Glossary](#)

Rk	Player	Year	Age	Draft	Tm	Lg	Ht & Wt			Games	
							Ht	Wt	BMI	G	GS
1	<a href="#">Gene Ferguson</a>	1970	23	3-70	<a href="#">SDG</a>	<a href="#">NFL</a>	6-8	300	33	14	3
2	<a href="#">Bill Hayhoe</a>	1970	24	5-116	<a href="#">GNB</a>	<a href="#">NFL</a>	6-8	258	28.3		
3	<a href="#">Jeff Curchin</a>	1970	23	6-139	<a href="#">CHI</a>	<a href="#">NFL</a>	6-7	260	29.3		
4	<a href="#">Forrest Blue</a>	1970	25	1-15	<a href="#">SFO</a>	<a href="#">NFL</a>	6-6	261	30.2		
5	<a href="#">Elmer Collett</a>	1970	26	14-208	<a href="#">SFO</a>	<a href="#">NFL</a>	6-6	244	28.2		
6	<a href="#">Paul Costa</a>	1970	29	4-55, 14-106AFL	<a href="#">BUF</a>	<a href="#">NFL</a>	6-6	268	31		
7	<a href="#">Howard Fest</a>	1970	24	6-139	<a href="#">CIN</a>	<a href="#">NFL</a>	6-6	262	30.3		
8	<a href="#">Rocky Freitas</a>	1970	25	3-73	<a href="#">DET</a>	<a href="#">NFL</a>	6-6	270	31.2		
9	<a href="#">Howard Kindig</a>	1970	29	13-170, 14-112AFL	<a href="#">BUF</a>	<a href="#">NFL</a>	6-6	265	30.6		
10	<a href="#">Wayne Moore</a>	1970	25		<a href="#">MIA</a>	<a href="#">NFL</a>	6-6	265	30.6		
11	<a href="#">Ralph Neely</a>	1970	27	2-28, 2-15AFL	<a href="#">DAL</a>	<a href="#">NFL</a>	6-6	265	30.6		
12	<a href="#">Bill Sandeman</a>	1970	28		<a href="#">ATL</a>	<a href="#">NFL</a>	6-6	252	29.1		
13	<a href="#">Jim Tyrer</a>	1970	31	14-188, 3-22AFL	<a href="#">KAN</a>	<a href="#">NFL</a>	6-6	280	32.4		
14	<a href="#">Russ Washington</a>	1970	24	1-4	<a href="#">SDG</a>	<a href="#">NFL</a>	6-6	289	33.4	14	13
15	<a href="#">Rayfield Wright*</a>	1970	25	7-182	<a href="#">DAL</a>	<a href="#">NFL</a>	6-6	255	29.5	14	14
16	<a href="#">Steve Wright</a>	1970	28	5-69, 8-59AFL	<a href="#">WAS</a>	<a href="#">NFL</a>	6-6	250	28.9	14	1
17	<a href="#">Bob Asher</a>	1970	22	2-27	<a href="#">DAL</a>	<a href="#">NFL</a>	6-5	250	29.6	6	0

**Query Results** [Share & more](#) [Glossary](#)

Rk	Player	Year	Age	Draft	Tm	Lg	Ht	Wt	BMI	G	GS
1	<a href="#">Gene Ferguson</a>	1970	23	3-70	<a href="#">SDG</a>	<a href="#">NFL</a>	6-8	300	33	14	3
2	<a href="#">Bill Hayhoe</a>	1970	24	5-116	<a href="#">GNB</a>	<a href="#">NFL</a>	6-8	258	28.3		
3	<a href="#">Jeff Curchin</a>	1970	23	6-139	<a href="#">CHI</a>	<a href="#">NFL</a>	6-7	260	29.3		
4	<a href="#">Forrest Blue</a>	1970	25	1-15	<a href="#">SFO</a>	<a href="#">NFL</a>	6-6	261	30.2		
5	<a href="#">Elmer Collett</a>	1970	26	14-208	<a href="#">SFO</a>	<a href="#">NFL</a>	6-6	244	28.2		
6	<a href="#">Paul Costa</a>	1970	29	4-55, 14-106AFL	<a href="#">BUF</a>	<a href="#">NFL</a>	6-6	268	31		
7	<a href="#">Howard Fest</a>	1970	24	6-139	<a href="#">CIN</a>	<a href="#">NFL</a>	6-6	262	30.3		
8	<a href="#">Rocky Freitas</a>	1970	25	3-73	<a href="#">DET</a>	<a href="#">NFL</a>	6-6	270	31.2		
9	<a href="#">Howard Kindig</a>	1970	29	13-170, 14-112AFL	<a href="#">BUF</a>	<a href="#">NFL</a>	6-6	265	30.6	10	10

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- Modify & Share Table
- Embed this Table
- Get as Excel Workbook (experimental)
- Get table as CSV (for Excel)
- Strip Mobile Formatting
- [Copy Link to Table to Clipboard](#)
- About Sharing Tools
- [Video: SR Sharing Tools & How-to](#)
- [Video: Stats Table Tips & Tricks](#)

## Query Results

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Reload page to return to the table-formatted data.

```
,,,,,,Ht & Wt,Ht & Wt,Ht & Wt,Games,Games
Rk,Player,Year,Age,Draft,Tm,Lg,Ht,Wt,BMI,G,GS
1,Gene Ferguson\FergGe20,1970,23,3-70,SDG,NFL,6-8,300,33,14
2,Bill Hayhoe\HayhBi20,1970,24,5-116,GNB,NFL,6-8,258,28.3,1
3,Jeff Curchin\CurcJe20,1970,23,6-139,CHI,NFL,6-7,260,29.3,
4,Forrest Blue\BlueFo00,1970,25,,SFO,NFL,6-6,261,30.2,1
5,Elmer Collett\Collel00,1970,26,14-208,SFO,NFL,6-6,244,28.
6,Paul Costa\CostPa00,1970,29,4-55 14-106AFL,BUF,NFL,6-6,268,31,14,14
7,Howard Fest\FestHo20,1970,24,6-139,CIN,NFL,6-6,262,30.3,14,2
8,Rocky Freitas\FreiRo00,1970,25,3-73,DET,NFL,6-6,270,31.2,14,14
9,Howard Kindig\KindHo21,1970,29,13-170 14-112AFL,BUF,NFL,6-6,265,30.6,10,10
10,Wayne Moore\MoorWa00,1970,25,,MIA,NFL,6-6,265,30.6,14,0
11,Ralph Neely\NeelRa00,1970,27,2-28 2-15AFL,DAL,NFL,6-6,265,30.6,14,11
12,Bill Sandeman\SandBi20,1970,28,,ATL,NFL,6-6,252,29.1,6,2
13,Jim Tyrer\TyreJi00,1970,31,14-188 3-22AFL,KAN,NFL,6-6,280,32.4,14,14
14,Russ Washington\WashRu00,1970,24,1-4,SDG,NFL,6-6,289,33.4,14,13
15,Rayfield Wright*\WrigRa01,1970,25,7-182,DAL,NFL,6-6,255,29.5,14,14
16,Steve Wright\WrigSt20,1970,28,5-69 8-59AFL,WAS,NFL,6-6,250,28.9,14,1
```

## Query Results

Share & more ▼ Glossary

Reload page to return to the table-formatted data.

```
,,,,,,Ht & Wt,Ht & Wt,Ht & Wt,Games,Games
Rk,Player,Year,Age,Draft,Tm,Lg,Ht,Wt,BMI,G,GS
1,Gene Ferguson\FergGe20,1970,23,3-70,SDG,NFL,6-8,300,33,14,3
2,Bill Hayhoe\HayhBi20,1970,24,5-116,GNB,NFL,6-8,258,28.3,13,3
3,Jeff Curchin\CurcJe20,1970,23,6-139,CHI,NFL,6-7,260,29.3,14,4
4,Forrest Blue\BlueFo00,1970,25,1-15,SFO,NFL,6-6,261,30.2,14,14
5,Elmer Collett\Collel00,1970,26,14-208,SFO,NFL,6-6,244,28.2,14,3
6,Paul Costa\CostPa00,1970,29,4-55 14-106AFL,BUF,NFL,6-6,268,31,14,14
7,Howard Fest\FestHo20,1970,24,6-139,CIN,NFL,6-6,262,30.3,14,2
8,Rocky Freitas\FreiRo00,1970,25,3-73,DET,NFL,6-6,270,31.2,14,14
9,Howard Kindig\KindHo21,1970,29,13-170 14-112AFL,BUF,NFL,6-6,265,30.6,10,10
10,Wayne Moore\MoorWa00,1970,25,,MIA,NFL,6-6,265,30.6,14,0
11,Ralph Neely\NeelRa00,1970,27,2-28 2-15AFL,DAL,NFL,6-6,265,30.6,14,11
12,Bill Sandeman\SandBi20,1970,28,,ATL,NFL,6-6,252,29.1,6,2
13,Jim Tyrer\TyreJi00,1970,31,14-188 3-22AFL,KAN,NFL,6-6,280,32.4,14,14
14,Russ Washington\WashRu00,1970,24,1-4,SDG,NFL,6-6,289,33.4,14,13
15,Rayfield Wright*\WrigRa01,1970,25,7-182,DAL,NFL,6-6,255,29.5,14,14
16,Steve Wright\WrigSt20,1970,28,5-69 8-59AFL,WAS,NFL,6-6,250,28.9,14,1
17,Bob Asher\AsheBo20,1970,22,2-27,DAL,NFL,6-5,250,29.6,6,0
18,Randy Beisler\BeisRa20,1970,26,1-4,SFO,NFL,6-5,250,29.6,14,13
19,Ed Budde\BuddEd00,1970,30,1-4 1-8AFL,KAN,NFL,6-5,265,31.4,14,14
20,Rich Buzin\BuziRi20,1970,24,2-41,NYG,NFL,6-5,255,30.2,14,14
21,Doug Crusan\CrusDo20,1970,24,1-27,MIA,NFL,6-5,250,29.6,14,14
22,Mike Current\CurrMi00,1970,25,3-58,DEN,NFL,6-5,274,32.5,14,14
23,Elbert Drungo\DrunEl20,1970,27,3-65,HOU,NFL,6-5,265,31.4,14,14
```

Open an Excel workbook. You then will paste the data into the first cell and this will be how it appears.

The screenshot shows an Excel workbook with a single column of text data. A blue arrow points from the 'Text to Columns' button in the ribbon to the data. The ribbon also shows 'Sort' and 'Filter' options.

	A	B	C	D	E	F	G	H	I	J
1	1, Gene Ferguson\FergGe20,1970,23,3-70,SDG,NFL,6-8,300,33,14,3									
2	2,Bill Hayhoe\HayhBi20,1970,24,5-116,GNB,NFL,6-8,258,28.3,13,3									
3	3,Jeff Curchin\CurcJe20,1970,23,6-139,CHI,NFL,6-7,260,29.3,14,4									
4	4,Forrest Blue\BlueFo00,1970,25,1-15,SFO,NFL,6-6,261,30.2,14,14									
5	5,Elmer Collett\CollEi00,1970,26,14-208,SFO,NFL,6-6,244,28.2,14,3									
6	6,Paul Costa\CostPa00,1970,29,4-55 14-106AFL,BUF,NFL,6-6,268,31,14,14									
7	7,Howard Fest\FestHo20,1970,24,6-139,CIN,NFL,6-6,262,30.3,14,2									
8	8,Rocky Freitas\FreiRo00,1970,25,3-73,DET,NFL,6-6,270,31.2,14,14									
9	9,Howard Kindig\KindHo21,1970,29,13-170 14-112AFL,BUF,NFL,6-6,265,30.6,10,10									
10	10,Wayne Moore\MoorWa00,1970,25,,MIA,NFL,6-6,265,30.6,14,0									
11	11,Ralph Neely\NeelRa00,1970,27,2-28 2-15AFL,DAL,NFL,6-6,265,30.6,14,11									
12	12,Bill Sandeman\SandBi20,1970,28,,ATL,NFL,6-6,252,29.1,6,2									
13	13,Jim Tyler\TyreJi00,1970,31,14-188 3-22AFL,KAN,NFL,6-6,280,32.4,14,14									
14	14,Russ Washington\WashRu00,1970,24,1-4,SDG,NFL,6-6,289,33.4,14,13									
15	15,Rayfield Wright*WrigRa01,1970,25,7-182,DAL,NFL,6-6,255,29.5,14,14									
16	16,Steve Wright\WrigSt20,1970,28,5-69 8-59AFL,WAS,NFL,6-6,250,28.9,14,1									
17	17,Bob Asher\AsheBo20,1970,22,2-27,DAL,NFL,6-5,250,29.6,6,0									
18	18,Randy Beisler\BeisRa20,1970,26,1-4,SFO,NFL,6-5,250,29.6,14,13									
19	19,Ed Budd\BuddEd00,1970,30,1-4 1-8AFL,KAN,NFL,6-5,265,31.4,14,14									
20	20,Rich Buzin\BuziRi20,1970,24,2-41,NYG,NFL,6-5,255,30.2,14,14									
21	21,Doug Crusan\CrusDo20,1970,24,1-27,MIA,NFL,6-5,250,29.6,14,14									

Convert Text to Columns Wizard - Step 1 of 3

The Text Wizard has determined that your data is Delimited.

If this is correct, choose Next, or choose the Data Type that best describes your data.

- Delimited - Characters such as commas or tabs separate each field.
- Fixed width - Fields are aligned in columns with spaces between each field.

Preview of selected data:

**Preview of selected data:**

1	1, Gene Ferguson\FergGe20,1970,23,3-70,SDG,NFL,6-8,300,33,14,3
2	2,Bill Hayhoe\HayhBi20,1970,24,5-116,GNB,NFL,6-8,258,28.3,13,3
3	3,Jeff Curchin\CurcJe20,1970,23,6-139,CHI,NFL,6-7,260,29.3,14,4
4	4,Forrest Blue\BlueFo00,1970,25,1-15,SFO,NFL,6-6,261,30.2,14,14
5	5,Elmer Collett\CollEi00,1970,26,14-208,SFO,NFL,6-6,244,28.2,14,3
6	6,Paul Costa\CostPa00,1970,29,4-55 14-106AFL,BUF,NFL,6-6,268,31,14,14
7	7,Howard Fest\FestHo20,1970,24,6-139,CIN,NFL,6-6,262,30.3,14,2
8	8,Rocky Freitas\FreiRo00,1970,25,3-73,DET,NFL,6-6,270,31.2,14,14
9	9,Howard Kindig\KindHo21,1970,29,13-170 14-112AFL,BUF,NFL,6-6,265,30.6,10,10

Buttons: Cancel, < Back, Next >, Finish

It is important that you click on the height column and choose TEXT, This is important because if it is not text it will convert the heights to dates.

**This screen lets you select each column and set the Data Format.**

Column data format

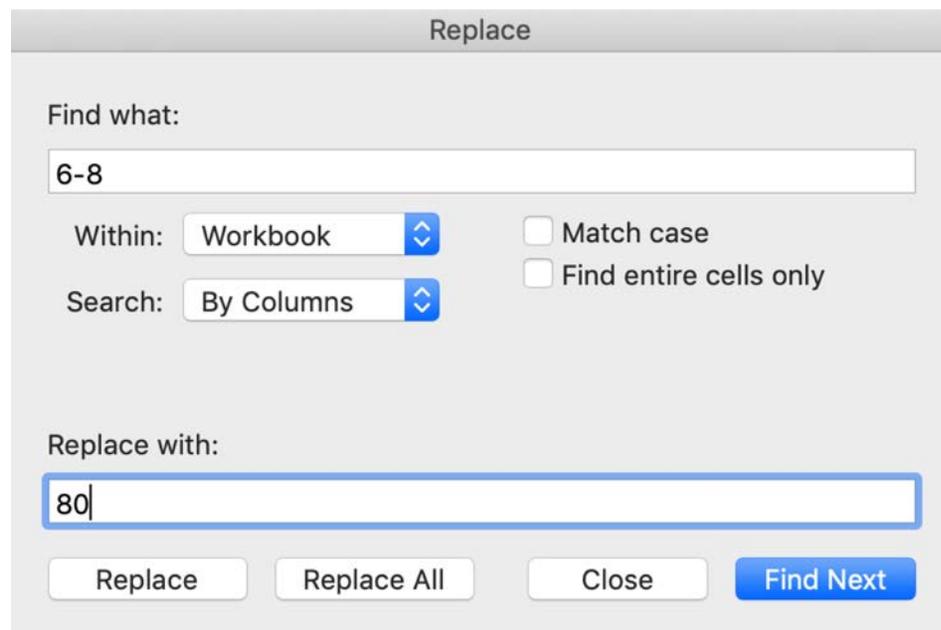
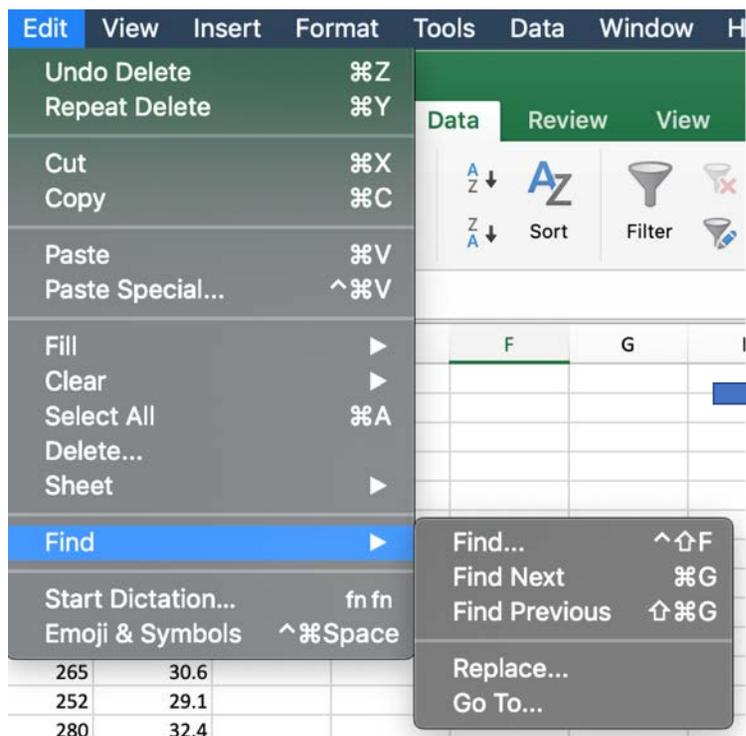
General  
 Text  
 Date: MDY   
 Do not import column (Skip)

Destination:   Advanced...

Preview of selected data:

General	General	General	General	General	Text	General	General	General	General		
1	Gene Ferguson\FergGe20	1970	23	3-70	SDG	NFL	6-8	300	33	14	3
2	Bill Hayhoe\HayhBi20	1970	24	5-116	GNB	NFL	6-8	258	28.3	13	3
3	Jeff Curchin\CurcJe20	1970	23	6-139	CHI	NFL	6-7	260	29.3	14	4
4	Forrest Blue\BlueFo00	1970	25	1-15	SFO	NFL	6-6	261	30.2	14	14
5	Elmer Collett\CollE100	1970	26	14-208	SFO	NFL	6-6	244	28.2	14	3
6	Paul Costa\CostPa00	1970	29	4-55 14-106AFL	BUF	NFL	6-6	268	31	14	14
7	Howard Fest\FestHo20	1970	24	6-139	CIN	NFL	6-6	262	30.3	14	2
8	Rocky Freitas\FreiRo00	1970	25	3-73	DET	NFL	6-6	270	31.2	14	14
9	Howard Kindig\KindHo21	1970	29	13-170 14-112AFL	BUF	NFL	6-6	265	30.6	10	10

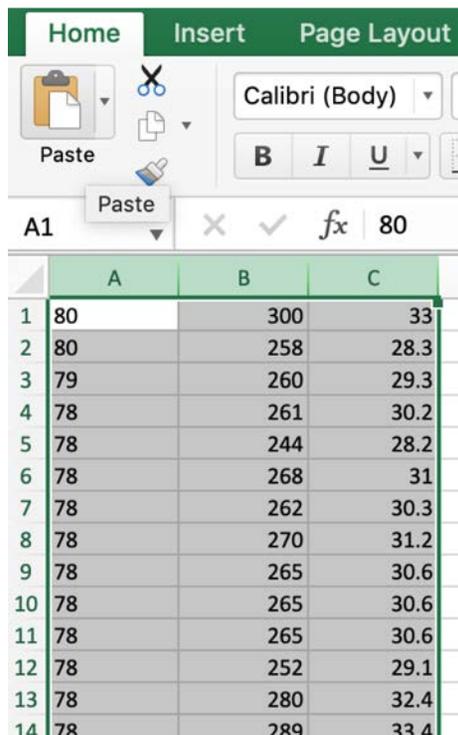
In your Excel workbook delete the columns that you do not want, such as player names, the year etc. I only wanted their Height, Weight, and BMI. Once you have only those values click in an empty cell and now we will convert the heights into inches. Chose Edit > Find > Replace (On a MAC)



This box will pop up and now you can convert all heights to inches. Choose the replace all (and “entire workbook” if you have more data in other pages) option when replacing.

## Importing the data into Nspire Teacher Software

Highlight the columns you wish to import into your Nspire Lists & Spreadsheet page.  
Copy the columns and then paste them into the Lists and spreadsheet in the A1



	A	B	C
1	80	300	33
2	80	258	28.3
3	79	260	29.3
4	78	261	30.2
5	78	244	28.2
6	78	268	31
7	78	262	30.3
8	78	270	31.2
9	78	265	30.6
10	78	265	30.6
11	78	265	30.6
12	78	252	29.1
13	78	280	32.4
14	78	289	33.4



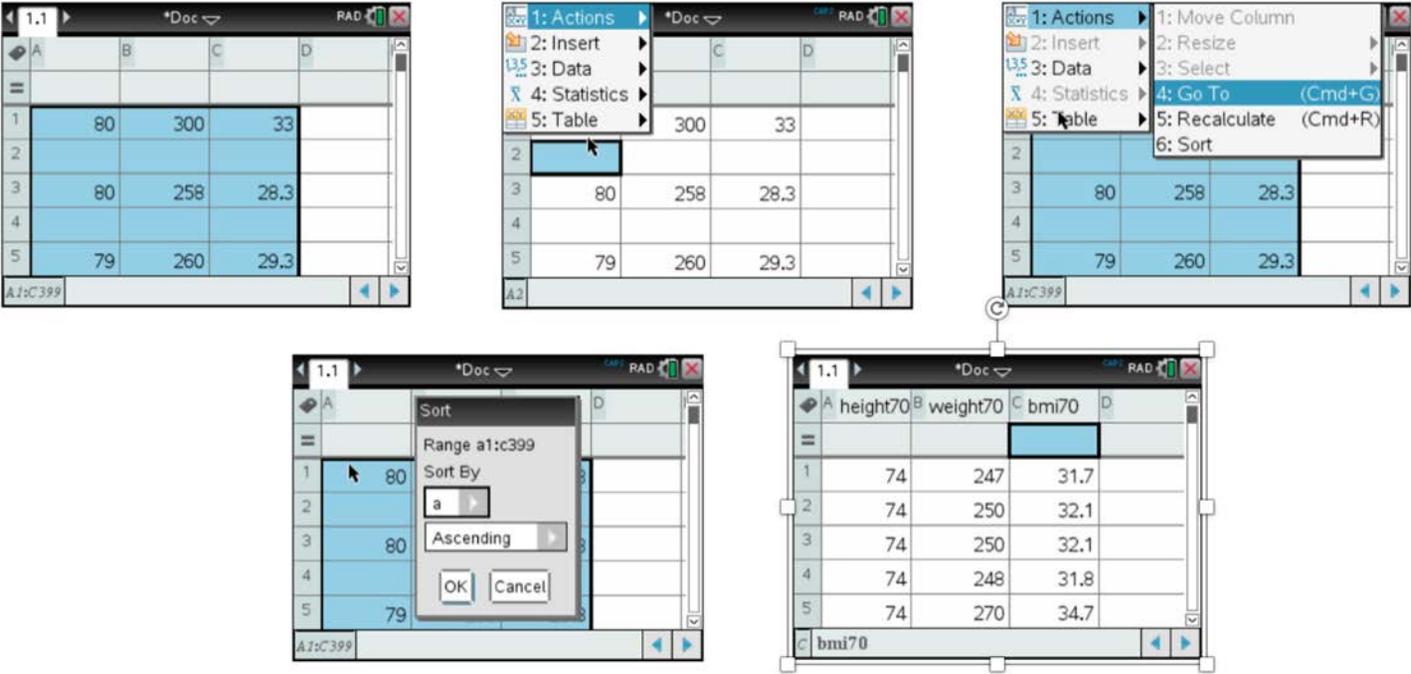
	A	B	C	D
1	80	300	33	
2				
3	80	258	28.3	
4				
5	79	260	29	



	A height70	B weight70	C bmi70	D
1	74	247	31.7	
2	74	250	32.1	
3	74	250	32.1	
4	74	248	31.8	
5	74	270	34.7	

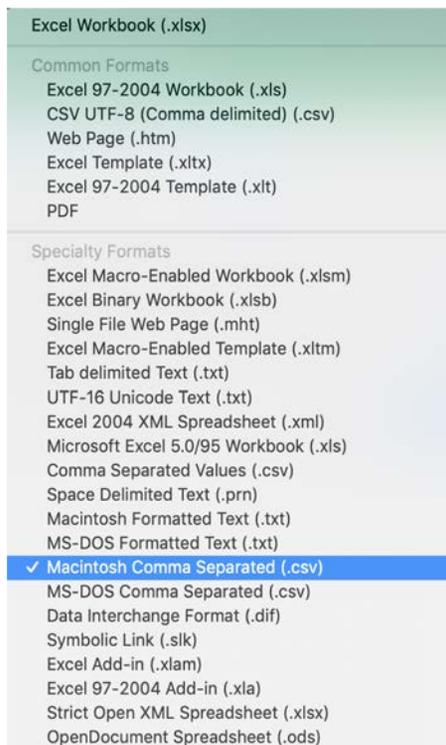
Remember to label your lists

These are the screenshots of the steps once the data is in your table. For some reason on my MAC when the data is pasted into the spreadsheet it was in every other cell. To clean this up while the data was all still highlighted use MENU > Actions > Sort > OK then label your columns. (This is not necessary to do)



## Importing Data into the T-I84CE

The process for importing data into the 84CE is a little more involved. You will still need to get the data into an Excel spreadsheet just like earlier. You will then need to save the file as a .CSV





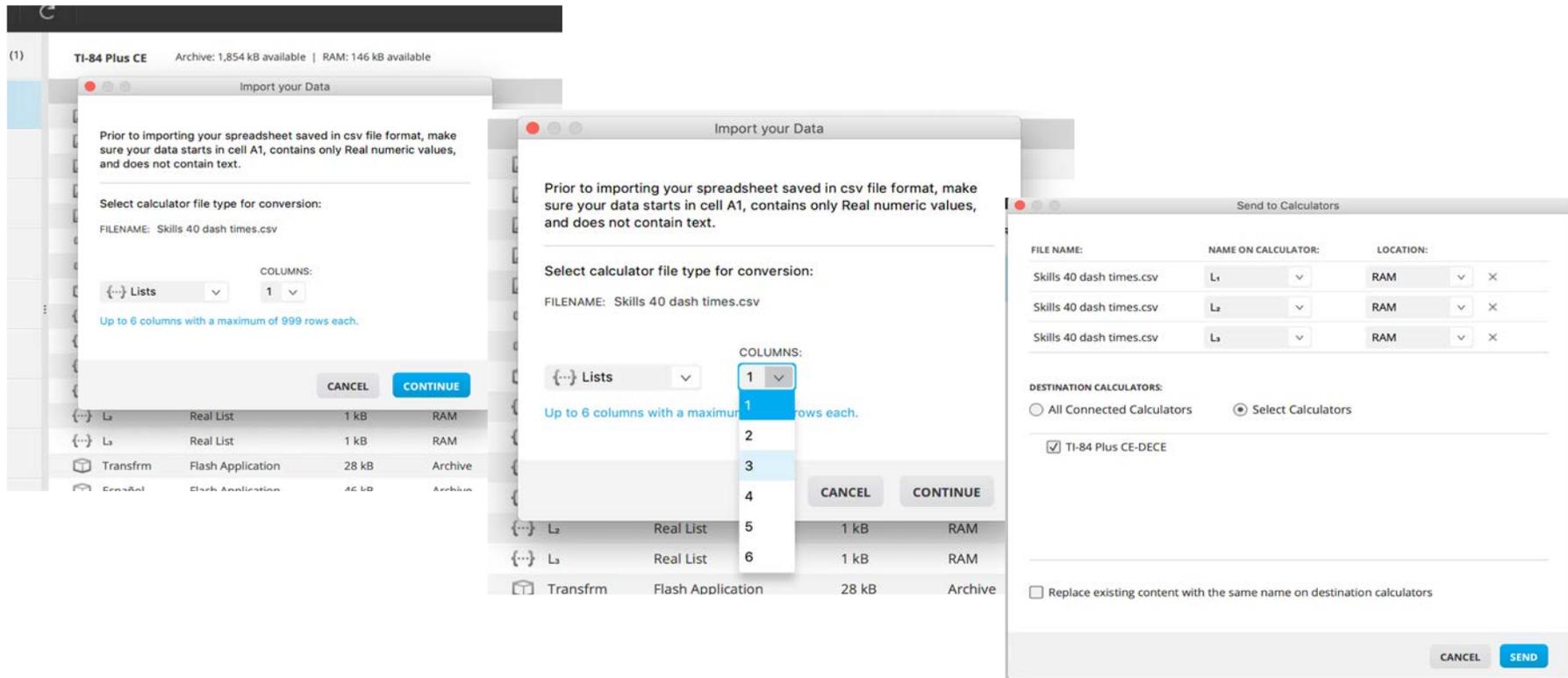
## Open TI-Connect software to import the data into your handheld.

Make sure to have your TI-84CE connected to your computer with a USB cable. With TI-Connect open, choose the Calculator Explorer icon. You will then drag the .csv file from your desktop into the Calculator Explorer window.

The screenshot shows the TI-Connect™ CE software interface. On the left is a dark sidebar with icons for SCREEN CAPTURE, CALCULATOR EXPLORER (highlighted in green), and PROGRAM EDITOR. The main window is titled "TI-84 Plus CE" and shows a table of data for a connected calculator. The table has columns for NAME, TYPE, SIZE, and LOCATION. A red arrow points from a .csv file icon on the desktop to the "Archive" column of the table.

NAME	TYPE	SIZE	LOCATION
Image3	Background Image	22 kB	Archive
Image5	Background Image	22 kB	Archive
Image4	Background Image	22 kB	Archive
Image2	Background Image	22 kB	Archive
Image1	Background Image	22 kB	Archive
012 Y	Real Number	9 B	RAM
012 X	Real Number	9 B	RAM
EzDcSave	AppVar	300 B	Archive
{...} L4	Real List	2 B	RAM
{...} L5	Real List	2 B	RAM
{...} L6	Real List	2 B	RAM
{...} L1	Real List	1 kB	RAM
{...} L2	Real List	1 kB	RAM

A window like this will pop up and depending upon how many lists you have in your file you will choose the number of lists to import.



Now you will have the data in your handheld



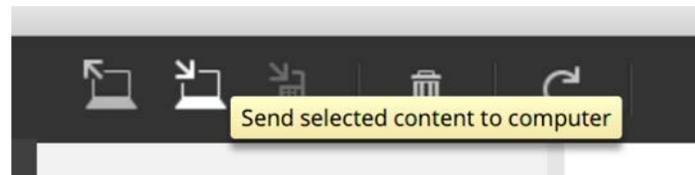
## TI-SmartView data importing.

Now you may wish to be able to do some demonstrating with the TI-SmartView software. You will need to be able to get the data that was just imported into the TI-Connect software onto the emulator.

While still in the TI-Connect software and in the calculator explorer window, select the lists that you want to move to your desktop.

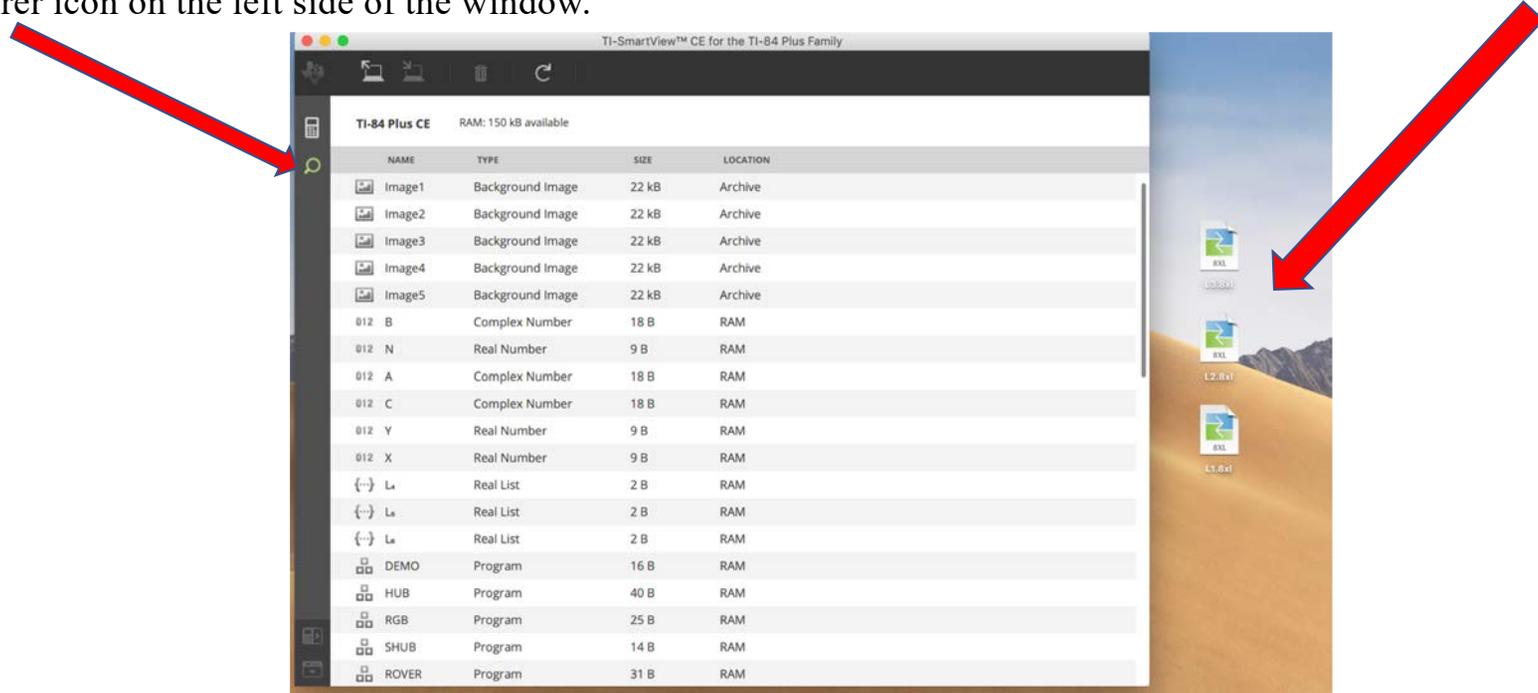
	Real List	Size	Memory
{...} L1	Real List	1 kB	RAM
{...} L2	Real List	1 kB	RAM
{...} L3	Real List	1 kB	RAM

Then at the top of the window you will choose the second icon from the left which will allow you to send the selected lists to the computer.

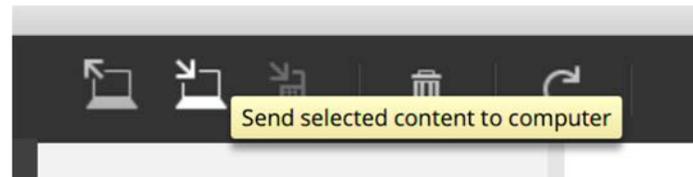


Using the TI-SmartView software choose the same calculator explorer icon on the left side of the window.

The lists will now be on the desktop.



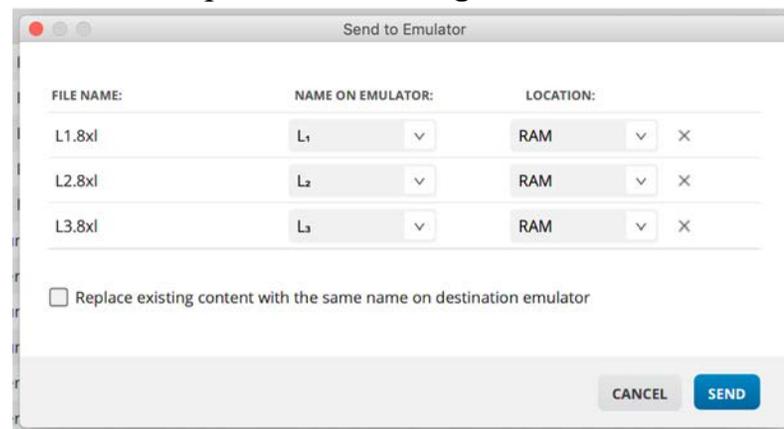
Then at the top of the window you will choose the second icon from the left which will allow you to send the selected lists to the computer.



Find the files you wish to add to the emulator.



A screen may appear to ask if you wish to replace the existing data.



# Creating Box Plots and Histograms in TI-84CE

# Body Mass Index:

BMI	Weight Status
Below 18.5	Underweight
18.5 - 24.9	Normal or Healthy Weight
25.0 - 29.9	Overweight
30.0 and Above	Obese