TI – 73 EXPLORER™
7TH GRADE ACTIVITY 10:
TABLE THAT EQUATION

TEXAS INSTRUMENTS

ACTIVITY OVERVIEW:
In this activity we will
- Use the table function to solve equations or approximate the answer

We want to solve the equation 10 = 2X + 5.5 One way to do this is to use the table function for calculator equations. You might need to adjust the table settings to find your solution.

Press the & key and enter these two expressions:
2x + 5.5 into Y1 and 10 into Y2

```
Plot1 Plot2 Plot3
\Y1■2X+5.5
\Y2■10
\Y3=
\Y4=
```

Set the table setting by pressing – φ and using the up and down arrow keys to adjust your screen to look like the one at the right.

```
TABLE SETUP
 TblStart=0
 ΔTbl=1
Indpnt: Auto  Ask
Depend: Auto  Ask
```

Press – ι to bring up the table for the two equations. You are looking for a value in Y1 the will equal 10.

```
 X   │ Y1  │ Y2
─────┼─────┼────
 0   │ 5.5 │ 10
 1   │ 7.5 │ 10
 2   │ 9.5 │ 10
 3   │11.5 │ 10
 4   │13.5 │ 10
 5   │15.5 │ 10
 6   │17.5 │ 10
─────┴─────┴────
X=0
```

You can see that the value for 10 does not show up in the list. You still have to adjust the table settings to find an X value that results in 10. The result for the X value of 2 is just smaller than 10 and 3 is too much. Press– φ and set your screen like the one on the right.

```
TABLE SETUP
 TblStart=2
 ΔTbl=.1
Indent: Auto Ask
Depend: Auto Ask
```

Now press – ι again and scan your Y1 to see if you have the value 10 in your list. You are close. How far apart are the two answers? How do you need to split the Xs again to get an answer of 10?

```
 X    Y1    Y2
 2    9.5   10
2.1   9.7   10
2.2   9.9   10
2.3  10.1   10
2.4  10.3   10
2.5  10.5   10
2.6  10.7   10
X=2
```

Repeat the process of adjusting the table settings and then see if you have found the answer.

Here are several problems to solve Try to solve them by adjusting your table settings for each problem.

-3X – 4 = 8 (make sure to use the – sign just below the 3 on the calculator keyboard.

```
 Plot1 Plot2 Plot3
\Y1 = -3X-4
\Y2 = 8
\Y3 =
\Y4 =
```

5X + 2 = -10

```
 Plot1 Plot2 Plot3
\Y1 = 5X+2
\Y2 = -10
\Y3 =
\Y4 =
```

As you work on the problems, try to get more precise with you original table settings. Try to estimate what you expect as an answer before you set the table. The settings will remain from previous problems.