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## Part 1 - A 20\% Discount

Your favorite sporting goods store is having a sale. Use your TI-84 Plus calculator to create a table that displays the discount and sale price for items originally costing $\$ 20, \$ 30, \$ 40$, etc., up to $\$ 100$ for a sale when all items are reduced by $20 \%$.

1. Using the TI-84 home screen, make a table for the 20 percent off sale. You can enter percent calculations in various ways. These are shown for $\$ 30$ at the right.

| NOEMAL FLOAT AUTO Real radian mp | II |
| :---: | :---: |
| . 20 *30 |  |
| $\frac{29}{10 \theta}$ *30 |  |
| (2ั๐*Зั) 100 | 6. |


| Original Price | 20\% off Discount | Sale Price |
| :---: | :---: | :---: |
| $\$ 20$ |  |  |
| $\$ 30$ |  |  |
| $\$ 40$ |  |  |
| $\$ 50$ |  |  |
| $\$ 60$ |  |  |
| $\$ 70$ |  |  |
| $\$ 80$ |  |  |
| $\$ 90$ |  |  |
| $\$ 100$ |  |  |
| $x$ |  |  |
| (any original price) |  |  |

2. Write an equation for the amount of the discount.
3. Write an equation for the sale price after the discount.
4. Use the TI-84 Plus table feature to make a table for the 20 percent off sale. Enter the "amount of discount" equation in Y 1 and the "sale price" equation in Y2. Press ENTER to enter the equations.

Then press 2nd [TBLSET] and enter the settings at the right to set up the table.

Then press [2nd[TABLE] to view the table.

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TABLE SETUP
TblStart=20
$\triangle$ Tbl=10
Indpnt: 月uto Ask
Depend: Auto Ask

Calculating Sale Prices
Name
Student Activity
Class
5. What would the discount be for an item that was originally $\$ 40$ ? $\qquad$
6. What would the sale price be for an item that was originally $\$ 60$ ? $\qquad$
7. What was the original price for an item that is $\$ 72$ during the sale? $\qquad$
8. How can you find the sale price for an item that originally cost $\$ 25$ ?
9. How can you find the sale price for an item that originally cost $\$ 42$ ?

## Part 2 - The Sale Gets Greater

10. Now make a table for a $40 \%$ off sale.

| Original Price | $40 \%$ off Discount | Sale Price |
| :---: | :---: | :---: |
| $\$ 20$ |  |  |
| $\$ 30$ |  |  |
| $\$ 40$ |  |  |
| $\$ 50$ |  |  |
| $\$ 60$ |  |  |
| $\$ 70$ |  |  |
| $\$ 80$ |  |  |
| $\$ 90$ |  |  |
| $\$ 100$ |  |  |
| $x$ |  |  |
| (any original price) |  |  |

11. How did you change the original equations (Y1 and Y2) to create the second table?
12. What would the discount be for an item that was originally $\$ 40$ ?
13. What would the sale price be for an item that was originally $\$ 60$ ? $\qquad$
14. What was the original price for an item that is $\$ 72$ during the sale? $\qquad$
15. How can you find the sale price for an item that originally cost $\$ 25$ ?
16. Suppose you have $\$ 24.50$ to spend. Find the original price for the most expensive item you can afford during the $40 \%$ off sale. $\qquad$
17. Write a one-step rule to find the sale price for any item during a $40 \%$ off sale, using $x$ as the original price. $\qquad$
