

Practice What You Know! Part 1

Teacher Notes

Look at the questions below and practice the calculator methods you have learned to find the answers. Remember to try to find the easiest way you can!

9 Josh earns money by washing cars in his neighborhood. He spent \$215 on supplies and charges \$15 for each car washed. Josh's profit,  $p$ , can be represented by the function  $p = 15n - 215$ , where  $n$  represents the number of cars that Josh washes. What is the minimum number of cars Josh must wash to make a profit?

- A 14
- B 29
- C 15
- D Not here

How did you find the answer? \_\_\_\_\_

*This is a question where students might use the "ASK" capacity of the table to find the answer. It is necessary for the students to answer that is asked, noticing that they need the **minimum** number of cars to make a profit.*

<pre>Plot1 Plot2 Plot3 \Y1=15X-215 \Y2= \Y3= \Y4= \Y5= \Y6= \Y7=</pre>	<pre>TABLE SETUP TblStart=0 ΔTbl=1 Indent: Auto Depend: Ask</pre>								
<table border="1"><thead><tr><th>X</th><th>Y1</th></tr></thead><tbody><tr><td>14</td><td>-5</td></tr><tr><td>29</td><td>220</td></tr><tr><td>15</td><td>10</td></tr></tbody></table>	X	Y1	14	-5	29	220	15	10	
X	Y1								
14	-5								
29	220								
15	10								
X=									

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*Students need to note that there is a profit made washing 29 cars but that is not the minimum number of cars for which a profit is earned.*

The next question is a little different. Think about how you can use methods used in previous lessons to find the answer to this questions.

**22** The formula below can be used to convert temperatures in degrees Fahrenheit,  $F$ , to temperatures in degrees Celsius,  $C$ .

$$C = \frac{5}{9}(F - 32)$$

On a certain day temperatures at the North Pole were between  $-20^{\circ}\text{F}$  and  $-15^{\circ}\text{F}$ . Which of these is a reasonable temperature in degrees Celsius for that day at the North Pole?

- F**  $-30^{\circ}\text{C}$
- G**  $-22^{\circ}\text{C}$
- H**  $-27^{\circ}\text{C}$
- J**  $-11^{\circ}\text{C}$

What answer did you find? \_\_\_\_\_

How did you find the answer? \_\_\_\_\_

*In this question, students can again use the “ASK” capacity of the table but students need to recognize that they are using an interval of numbers. They also need to remember how to appropriately enter fractions.*

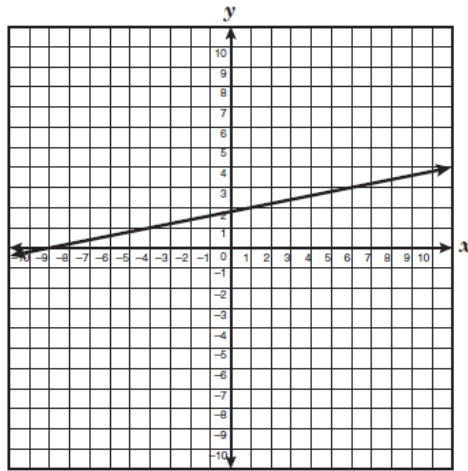
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<pre> Plot1 Plot2 Plot3 \Y1=(5/9)(X-32) \Y2= \Y3= \Y4= \Y5= \Y6= \Y7=                 </pre>	<pre> TABLE SETUP TblStart=0 ΔTbl=1 Indent: Auto Depend: Hsk                 </pre>												
<table border="1" style="border-collapse: collapse; width: 100%; text-align: center;"> <thead> <tr> <th style="width: 33%;">X</th> <th style="width: 33%;">Y1</th> <th style="width: 33%;"></th> </tr> </thead> <tbody> <tr> <td>-20</td> <td>-28.89</td> <td></td> </tr> <tr> <td>-15</td> <td>-26.11</td> <td></td> </tr> <tr> <td colspan="3" style="border-top: 1px solid black; border-bottom: 1px solid black;">X=</td> </tr> </tbody> </table>	X	Y1		-20	-28.89		-15	-26.11		X=			
X	Y1												
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*Students need to recognize that they need to select the answer choice that is between the two y-values in the table. The answer choice is  $-27^{\circ}\text{C}$ .*

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59 The graph of  $-x + 5y = 9$  is shown below.



Which point represents a solution to this equation?

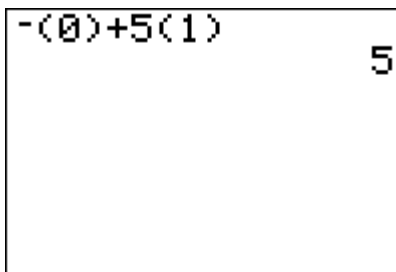
- A (0, 1)
- B (2, 1)
- C (1, 2)
- D (-7, 0)

Describe your answer and the process you used to find that answer.

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*Students need to understand that a solution of an equation is a point on the graph of the line. One way to find the solution is to evaluate on the home screen.*



*This shows that the first ordered pair is not a solution because it is not equal to 9. Students should remember that they can recall and edit the previous procedure by pressing 2<sup>nd</sup> ENTER.*

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$-(0)+5(1)$ $-(1)+5(1)$	5	$-(0)+5(1)$ $-(2)+5(1)$	5 3
$-(0)+5(1)$ $-(2)+5(1)$ $-(1)+5(2)$	5 3 9		

The correct ordered pair is (1,2) since the value is 9.

Now look at a griddable question.

**19** In the equation  $6.5x + 1.4y = 59$ , what is the value of  $x$  when  $y = 5$ ?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

What is your answer? \_\_\_\_\_

Describe your method for finding the solution.

*Students may recall from previous activities that you cannot "ASK" for the answer of a question that is not multiple-choice like this one. Students also need to adapt the equation by substituting the value given for  $y$  into the equation.*

Plot1 Plot2 Plot3 $\setminus Y_1$ <input type="checkbox"/> $6.5X+1.4(5)$ <input type="checkbox"/> $\setminus Y_2$ = $\setminus Y_3$ = $\setminus Y_4$ = $\setminus Y_5$ = $\setminus Y_6$ = $\setminus Y_7$ =	TABLE SETUP TblStart=0 $\Delta$ Tbl=1 IndEnt: <input type="checkbox"/> Ask Depend: <input type="checkbox"/> Ask
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Students will need to scan the x-values in the table until they find the x-value that gives the correct y-value. When  $x=8$ ,  $y=59$ .

X	Y <sub>1</sub>	
0	7	
1	13.5	
2	20	
3	26.5	
4	33	
5	39.5	
6	46	

X=0

X	Y <sub>1</sub>	
2	20	
3	26.5	
4	33	
5	39.5	
6	46	
7	52.5	
8	59	

X=8

They also need to understand that it is the input value that is the answer to the question.