

Calculator Quiz: Must Explain Your Calculator Steps in Solving Problems

1 What is the value of x in the equation below?

- new document
- add calculator
- menu
- Algebra
- numerical solve

$3x - 10x + 5 = 5x + 17$

100

-1

• plug in equation and at the end put , x

2 What is the value of x in the equation below?

- menu
- Algebra
- numerical solve

$\frac{2}{3}(9x - 6) = 4x + 10$

7

• plug in equation and at the end put , x

3 Jackie is creating a spreadsheet to keep a record of amounts she has collected from customers for candy boxes she has sold to them. She must write a linear equation in two variables to represent the amount collected in terms of number of boxes sold. She has been using the table below to determine the amount to charge.

what depends

| Number of Boxes of Candy | Amount Charged (\$) |
|--------------------------|---------------------|
| 1 | 12.25 |
| 3 | 25.75 |
| 4 | 32.50 |
| 7 | 52.75 |
| 10 | 73.00 |

Which linear equation in two variables can Jackie use to represent the amount collected in terms of number of boxes sold in her spreadsheet?

- ~~F~~ $y = 13.5x - 1.25$
- G** $y = 6.75x + 5.5$?
- ~~H~~ $y = 13.5x + 12.25$
- ~~J~~ $y = 5.5x + 6.75$

- new document
- add graph
- plug in equation
- menu
- table → split screen
- repeat until you find the answer

✓ 4 The slope of the line that passes through the points $(-6, w)$ and $(-10, 4)$ is $\frac{1}{8}$

What is the value of w ?

draw skeleton

$$\frac{1}{8} = \frac{(4) - (w)}{(-10) - (-6)}$$

- new doc
- add calc
- menu
- Algebra
- numerical solve
- plug in equation at the end

4.5

✓ 5 What is the zero of $r(x) = \frac{8}{3}x - 16$?

- new doc
- add graph
- plug in equation
- menu
- trace
- graph trace

y is always 0

$(6, 0)$

60

✓ 6 Which representations have the same rate of change of y with respect to x as the equation $3x + 5y = 15$? - 60

| <p>I. ✓</p> $y = \frac{3}{5}x + 2$ | <p>II. ✓</p> $y + 7 = -0.6(x - 4)$ | | | | | | | | | | | | | | |
|------------------------------------|--|---|---|-----|---|-----|---|----|----|---|----|---|----|----|-----|
| <p>III. ✓</p> | <p>IV. ✓</p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>-15</td> <td>5</td> </tr> <tr> <td>-10</td> <td>2</td> </tr> <tr> <td>-5</td> <td>-1</td> </tr> <tr> <td>0</td> <td>-4</td> </tr> <tr> <td>5</td> <td>-7</td> </tr> <tr> <td>10</td> <td>-10</td> </tr> </tbody> </table> | x | y | -15 | 5 | -10 | 2 | -5 | -1 | 0 | -4 | 5 | -7 | 10 | -10 |
| x | y | | | | | | | | | | | | | | |
| -15 | 5 | | | | | | | | | | | | | | |
| -10 | 2 | | | | | | | | | | | | | | |
| -5 | -1 | | | | | | | | | | | | | | |
| 0 | -4 | | | | | | | | | | | | | | |
| 5 | -7 | | | | | | | | | | | | | | |
| 10 | -10 | | | | | | | | | | | | | | |

$$\frac{(5) - (2)}{(-15) - (-10)} = \frac{3}{-5} = -0.6$$

- 60

A II and IV only

~~B~~ I, II, and IV only

~~C~~ II, III, and IV only

~~D~~ I, II, III, and IV

- add graph
- del → relation
- analyze graph
- $dy/dx = -0.6$
- new doc
- add graph
- hit del
- relation
- plug in equation
- analyze graph
- $dy/dx = -0.6$

7 - What is the solution set for $-4x + 10 \geq 5x + 55$?

~~A~~ $x \geq 5$

~~B~~ $x \geq 45$

C $x \leq -5$

~~D~~ $x \leq -45$

-5

→ change to equals sign

- new doc
- add calc
- Algebra
- numerical solve

8 The equations below are representations of linear equations in two variables.

I. $y = \frac{2}{3}x + 4$

II. $y - 2 = \frac{2}{3}(x - 9)$.667

III. $2x + 3y = 12$ - .66

Which linear equation(s) in two variables has a graph that passes through the point $(9, -2)$ and has a slope of $\frac{2}{3}$?

~~A~~ I, II, and III

B I and II only

~~C~~ I and III only

~~D~~ II and III only

- new doc
- add graph
- hit del
- relation
- plug in $2x + 3y = 12$
- analyze graph
- $dy/dx = -.667$

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