

#1

Choose the best answer

Michaeltown is going through an economic downturn and jobs are being lost at a rate of 16 per month. As the mayor of Michaeltown, you need to write a formula to relate the number of months v to the number of jobs lost u if there was a one time gain of 3 jobs due to government construction program. e.g. $y=1x+5$

- $u = -3v + 16$ $u = -16v + 3$
- $16v = -3u$ $3v = 16 - u$

Show your work

#2

Choose the best answer

The city produces 10 jobs every year v . Write an equation to show the relationship between how many jobs are produced each year, and the total number of jobs u if there are already 1 available. e.g. $y=1x+1$

- $1v = -10 + u$ $u = 10v + 1$
- $u = 1v - 10$ $10v = 1u$

Show your work

#3

The International Space Station (ISS) relies on solar panels and batteries for its power. When the ISS is in the shadow of the Earth, the battery drains at a rate of 19 power units per hour. Find the formula to relate the number of hours v to the amount of power loss u if the ISS loses 8 power units from a short circuit. e.g. $y=1x+5$

Show your work

#4

Alyssa wants a formula to figure out how far she went on her run. She will need the total distance i , and how many blocks she ran j . If a block is 20 meters, write the equation she needs if Alyssa first ran 2 meters. e.g. $y=1x+1$

Show your work

#5

Choose the best answer

You are taking your grain to market tomorrow and have y bushels of wheat, and each bushel sells for \$12. Write an equation that shows the relationship between the total worth x , and the number of bushels if you must first pay \$8 to sell at the market. e.g. $y=1x+1$

- $12y=8x$ $8y=-12+x$
- $x=12y-8$ $x=-8y-12$

Show your work

#6

Choose the best answer

Out at Camp Alexander the squirrels like to sneak and steal sunflower seeds out of the birdfeeder at a rate 17 per hour. Write a formula to find the number seeds lost w related to the hour x if the custodian adds 8 seeds to the feeder. e.g. $y=1x+5$

- $w=-17x+8$ $8x=-17-w$
- $17x=-8w$ $w=8x-17$

Show your work

#7

Choose the best answer

Farmer Gavin has a supply of hay to feed the cows everyday. Write a formula to relate the hay lost t and the number of days u if the cows eat 16 bales of hay per day and Gavin finds 10 bales behind the barn.

e.g. $y=1x+5$

- $10u = -16 + t$ $16u = 10t$
- $t = 10u - 16$ $t = -16u + 10$

Show your work

#8

Caleb makes \$5 an hour but owes a one time fee of \$1 for a uniform purchase. Write an equation that shows the relationship between the money made m and the hours worked n . e.g. $y=1x+1$

Show your work

#9

Mackenzie sells strawberries out of the back of her van. In order to predict the required stock write a formula to relate the number of strawberries lost w to the hour x if she sells 5 per hour but has to throw out 1 moldy one. e.g. $y=1x+5$

Show your work

#10

Choose the best answer

Farmer Isabelle's total chicken flock t is decreasing. She loses 12 per week. Write a formula to represent the relationship between the total number of chickens and the number of weeks u if Isabelle received a one time gift of 5 chickens. e.g. $y=1x+5$

- $5u=12-t$ $12u=-5t$
- $t=-12u+5$ $t=-5u+12$

Show your work

#11

Choose the best answer

Since starting a new recycling plan, Zachary's office recycles 10 kilograms of paper each week. Write an equation that shows the relationship between the weeks p and the paper recycled o if they first waste 3 kilograms of paper. e.g. $y=1x+1$

- $o=-3p+10$ $o=10p-3$
- $10p=-3o$ $3p=10-o$

Show your work

#12

Choose the best answer

Farmer Isabelle's total chicken flock t is decreasing. She loses 12 per week. Write a formula to represent the relationship between the total number of chickens and the number of weeks u if Isabelle received a one time gift of 5 chickens. e.g. $y=1x+5$

- $5u=12-t$ $12u=-5t$
- $t=-12u+5$ $t=-5u+12$

Show your work

Question	Answer
#1	choice 2
#2	choice 2
#3	$u = -19v - 8$
#4	$i = 20j + 2$
#5	choice 3
#6	choice 1
#7	choice 4
#8	$m = 5n - 1$
#9	$w = -5x - 1$
#10	choice 3
#11	choice 2
#12	choice 3