

#1

Choose the best answer

Farmer Andrew needs to figure out how many total cattle a he will have next year. He counts his cattle b and knows each will produce 20 calves each year. Write an equation that shows this relationship and can be used to calculate how many cattle Andrew will have next year if Andrew is given 4 cows at the end of the year. e.g. $y=1x+1$

$20b=4a$

$4b=20 + a$

$a=4b + 20$

$a=20b + 4$

Show your work

#2

You are taking your grain to market tomorrow and have c bushels of wheat, and each bushel sells for \$2. Write an equation that shows the relationship between the total worth b , and the number of bushels if you also get a \$9 flat rate. e.g. $y=1x+1$

Show your work

#3

The town water tower is leaking 5 water units per day. Relate the amount of water lost f and the day g if 7 units were lost due to theft. e.g. $y=1x+5$

Show your work

#4

Brayden sells strawberries out of the back of his van. In order to predict the required stock, write a formula to relate the number of strawberries lost u to the hour v if he sells 16 per hour and finds 6 in the back of the fridge. e.g. $y=1x+5$

Show your work

#5

Connor wants to make a unicorn hair wig, but a unicorn only sheds about 16 hairs per day. Write an equation to show the relationship between days l and the total unicorn hairs shed k if Connor first owes 2 hairs to his brother. e.g. $y=1x+1$

Show your work

#6

You are taking your grain to market tomorrow and have o bushels of wheat, and each bushel sells for \$19. Write an equation that shows the relationship between the total worth n , and the number of bushels if you must first pay \$3 to sell at the market. e.g. $y=1x+1$

Show your work

#7

Choose the best answer

Alyssa 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 c to the hour d if she sells 3 per hour and finds 5 in the back of the fridge. e.g. $y=1x+5$

$3d=-5c$

$5d=-3-c$

$c=-5d-3$

$c=-3d+5$

Show your work

#8

Since starting a new recycling plan, Caleb's office recycles 20 kilograms of paper each week. Write an equation that shows the relationship between the weeks l and the paper recycled k if they first waste 2 kilograms of paper. e.g. $y=1x+1$

Show your work

#9

Choose the best answer

Benjamin sells strawberries out of the back of his van. In order to predict the required stock write a formula to relate the number of strawberries lost r to the hour s if he sells 17 per hour but has to throw out 9 moldy ones. e.g. $y=1x+5$

$9s=17+r$

$r=-17s-9$

$r=9s+17$

$17s=9r$

Show your work

#10

Choose the best answer

The city produces 17 jobs every year g . Write an equation to show the relationship between how many jobs are produced each year, and the total number of jobs f if there are already 5 available. e.g.

$$y=1x+1$$

$f=-5g-17$

$5g=-17+f$

$f=17g+5$

$17g=5f$

Show your work

#11

Sydneytown is going through an economic downturn and jobs are being lost at a rate of 9 per month. As the mayor of Sydneytown, you need to write a formula to relate the number of months t to the number of jobs lost s if there was a one time gain of 5 jobs due to government construction program. e.g. $y=1x+5$

Show your work

#12

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 9 power units per hour. Find the formula to relate the number of hours j to the amount of power loss i if the ISS loses 5 power units from a short circuit. e.g. $y=1x+5$

Show your work

Question	Answer
#1	choice 4
#2	$b=2c+9$
#3	$f=-5g-7$
#4	$u=-16v+6$
#5	$k=16l-2$
#6	$n=19o-3$
#7	choice 4
#8	$k=20l-2$
#9	choice 2
#10	choice 3
#11	$s=-9t+5$
#12	$i=-9j-5$