

#1

Astronaut Madison needs to do an EVA in her spacesuit and wants to calculate how much oxygen will be lost at every minute. Madison consumes 18 units of oxygen every minute and she gains 1 unit from the reserve tank. Write an equation to relate the amount of oxygen lost v and the amount of minutes w that have passed.

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

Show your work

#2

Choose the best answer

Farmer Makayla has a supply of hay to feed the cows everyday. Write a formula to relate the hay lost k and the number of days l if the cows eat 16 bales of hay per day and Makayla finds 5 bales behind the barn.

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

- $k=-5l+16$ $k=-16l+5$
- $16l=5k$ $5l=16+k$

Show your work

#3

Choose the best answer

Sydney 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 n and the total unicorn hairs shed m if Sydney first owes 10 hairs to her brother. e.g. $y=1x+1$

- $10n=16-m$ $m=16n-10$
- $m=10n+16$ $16n=-10m$

Show your work

#4

Choose the best answer

The city produces 18 jobs every year l . Write an equation to show the relationship between how many jobs are produced each year, and the total number of jobs k if there are already 3 available. e.g.

$$y=1x+1$$

- $k=3l - 18$ $18l=3k$
- $3l=-18 + k$ $k=18l + 3$

Show your work

#5

The city produces 8 jobs every year c . Write an equation to show the relationship between how many jobs are produced each year, and the total number of jobs b if they have to reserve 4 jobs for employment equity e.g. $y=1x+1$

Show your work

#6

Out at Camp Darren the squirrels like to sneak and steal sunflower seeds out of the birdfeeder at a rate 13 per hour. Write a formula to find the number seeds lost w related to the hour x if the custodian adds 4 seeds to the feeder. e.g. $y=1x+5$

Show your work

#7

Farmer Brayden needs to figure out how many total cattle f he will have next year. He counts his cattle g and knows each will produce 17 calves each year. Write an equation that shows this relationship and can be used to calculate how many cattle Brayden will have next year if Brayden is given 8 cows at the end of the year.

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

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

Farmer Brianna has a supply of hay to feed the cows everyday. Write a formula to relate the hay lost j and the number of days k if the cows eat 12 bails of hay per day and Brianna loses 8 bales due to mold.

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

Show your work

#10

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

#11

A plumber makes \$15 an hour, and wants to calculate how much money she will make in g hours if they also get a flat rate of \$4. Write an equation to show the relationship between money made per hour and total money made f . e.g. $y=1x+1$

Show your work

#12

Zoe 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 m and the total unicorn hairs shed l if Zoe already has 8 hairs. e.g. $y=1x+1$

Show your work

Question	Answer
#1	$v = -18w + 1$
#2	choice 2
#3	choice 2
#4	choice 4
#5	$b = 8c - 4$
#6	$w = -13x + 4$
#7	$f = 17g + 8$
#8	$k = 20l - 2$
#9	$j = -12k - 8$
#10	$i = -9j - 5$
#11	$f = 15g + 4$
#12	$l = 16m + 8$