#1

Choose the best answer

Madison 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 \( r \) to the hour \( s \) if she sells 15 per hour but has to throw out 3 moldy ones. e.g. \( y = 1x + 5 \)

- \( 15s = 3r \)
- \( r = -15s - 3 \)
- \( 3s = -15 + r \)
- \( r = 3s - 15 \)

Show your work

#2

Choose the best answer

The city produces 6 jobs every year \( f \). Write an equation to show the relationship between how many jobs are produced each year, and the total number of jobs \( e \) if they have to reserve 7 jobs for employment equity e.g. \( y = 1x + 1 \)

- \( e = 6f - 7 \)
- \( 6f = 7e \)
- \( e = 7f - 6 \)
- \( 7f = -6 + e \)

Show your work

#3

Choose the best answer

Sophia makes $17 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 \( s \) and the hours worked \( t \). e.g. \( y = 1x + 1 \)

- \( 1t = 17 + s \)
- \( s = 17t - 1 \)
- \( 17t = 1s \)
- \( s = 1t + 17 \)

Show your work
Choose the best answer

Evan wants to make a unicorn hair wig, but a unicorn only sheds about 3 hairs per day. Write an equation to show the relationship between days $h$ and the total unicorn hairs shed $g$ if Evan first owes 8 hairs to his brother. e.g. $y = 1x + 1$

- $8h = -3 + g$
- $g = 3h - 8$
- $3h = 8g$
- $g = -8h - 3$

Show your work

Choose the best answer

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 10 power units per hour. Find the formula to relate the number of hours $w$ to the amount of power loss $v$ if the ISS gains 9 power units from a solar flare. e.g. $y = 1x + 5$

- $10w = -9v$
- $v = 9w + 10$
- $v = -10w + 9$
- $9w = 10 - v$

Show your work

Choose the best answer

Since starting a new recycling plan, Avery's office recycles 9 kilograms of paper each week. Write an equation that shows the relationship between the weeks $v$ and the paper recycled $u$ if they have 2 kilograms to start. e.g. $y=1x+1$

- $u = -2v + 9$
- $2v = 9 + u$
- $9v = 2u$
- $u = 9v + 2$

Show your work
Choose the best answer

Madison 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 $r$ to the hour $s$ if she sells 15 per hour but has to throw out 3 moldy ones. e.g. $y = 1x + 5$

- $15s = 3r$
- $3s = -15 + r$
- $r = -15s - 3$
- $r = 3s - 15$

Show your work

Choose the best answer

The town water tower is leaking 18 water units per day. Relate the amount of water lost $t$ and the day $u$ if 10 units were added via the reserve tank. e.g. $y = 1x + 5$

- $t = 10u - 18$
- $t = -18u + 10$
- $10u = -18 + t$
- $18u = 10t$

Show your work

Choose the best answer

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 10 power units per hour. Find the formula to relate the number of hours $f$ to the amount of power loss $e$ if the ISS loses 7 power units from a short circuit. e.g. $y = 1x + 5$

- $10f = -7e$
- $e = -7f + 10$
- $e = -10f - 7$
- $7f = 10 - e$

Show your work
### Choose the best answer

Farmer Ashley needs to figure out how many total cattle she will have next year. She counts her cattle and knows each will produce 13 calves each year. Write an equation that shows this relationship and can be used to calculate how many cattle Ashley will have next year if Ashley is given 3 cows at the end of the year. e.g. \( y = 1x + 1 \)

- \( o = 13p + 3 \)
- \( 3p = -13 - o \)
- \( 13p = -3o \)
- \( o = 3p - 13 \)

Show your work

### Choose the best answer

Farmer Darren has a supply of hay to feed the cows everyday. Write a formula to relate the hay lost and the number of days if the cows eat 12 bails of hay per day and Darren loses 9 bales due to mold. e.g. \( y = 1x + 5 \)

- \( 12k = -9j \)
- \( j = -12k - 9 \)
- \( 9k = -12 - j \)
- \( j = 9k - 12 \)

Show your work

### Choose the best answer

Nick wants a formula to figure out how far he went on his run. He will need the total distance \( k \), and how many blocks he ran \( l \). If a block is 17 meters, write the equation he needs if Nick first ran 7 meters. e.g. \( y = 1x + 1 \)

- \( k = 7l - 17 \)
- \( k = 17l + 7 \)
- \( 17l = -7k \)
- \( 7l = -17 - k \)

Show your work
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>choice 3</td>
</tr>
<tr>
<td>#2</td>
<td>choice 1</td>
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<tr>
<td>#3</td>
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<td>#4</td>
<td>choice 3</td>
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<tr>
<td>#9</td>
<td>choice 2</td>
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