**Linear Equation – Introduction Word Problems**

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| 1. Suppose the water level of a reservoir is 34 feet and is receding (dropping in amount) at a rate of 0.5 foot per day. 2. Create a table of values to show the water level over the first 3 days. 3. Write an expression to find the water level after *d* days. 4. Find the water level after 8 days 5. Find the water level after 12 days. |
| 1. A new streaming service costs $7.00 a month for one device. For each additional device, it will cost an extra $2.50. 2. Create a table of values to show the cost of signing up with 1, 2, or 3 devices. 3. Write an expression to find the cost of using the service with *d* devices. 4. Find the cost if one user has 8 devices registered. 5. Find the cost if one user has 12 devices registered |
| 1. A plumber charges $85 for a service call plus $55 for each hour of service. 2. Create a table of values to show the cost of hiring the plumber 1, 2, and 3 hours. 3. Write an expression to find the cost of hiring the plumber for *h* hours 4. Find the cost of hiring the plumber for 4 hours of work 5. Find the cost of hiring the plumber for 7 hours of work |
| 1. A truck rental company charges $130 flat rate to rent a truck, plus $0.75 per km driven. 2. Create a table of values to show the cost of renting a truck and driving it 1km, 2km or 3 km. 3. Write an expression to find the cost of renting the truck and driving in *k* km. 4. Find the cost of renting the truck and driving 225 km. 5. Find the cost of rending the truck and driving 82 km. |
| 1. Freida got $75 for her birthday from her Grandma. She gets $13 a week as an allowance for doing chores around the house. She is trying to save money. 2. Create a table of values showing how much she saves over the first 3 weeks. 3. Write an expression to find how much she saves over *w* weeks. 4. Find how much she will have saved after 4 weeks 5. Find how much she will save after 3 months (12 weeks) |
| 1. Jimmy works for Koodo and sells phone plans at the mall. He makes $630 a week plus $17 for every customer he sells a new plan to. 2. Create a table of values showing how much Jimmy makes if he signs 1, 2 or 3 customers up at the mall. 3. Write an expression to find out how much he makes a week if he signs up *c* customers. 4. Calculate Jimmy’s income if he registers 12 people for a plan 5. Calculate Jimmy’s income if he sells 32 people a plan |

**Linear Equation – Introduction Word Problems *ANSWERS***

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| Suppose the water level of a reservoir is 34 feet and is receding (dropping in amount) at a rate of 0.5 foot per day.  Y = -0.5x + 34  b/c slope is the repeating value -> -0.5 each day  b/c y-int is where it is starting from (when x=0)   |  |  | | --- | --- | | X (Days) | Y (Water Level) | | 0 | 34  - 0.5 | | 1 | 33.5 | | 2 | 33 | |
| A new streaming service costs $7.00 a month for one device. For each additional device, it will cost an extra $2.50.  Y = 2.5 x + 7  b/c slope is the repeating value -> 2.5 each device  b/c y-int is the initial cost ($7)   |  |  | | --- | --- | | X (Devices) | Y (Cost) | | 1 | 7.00  + 2.5 | | 2 | 9.50 | | 3 | 12.00 | |
| A plumber charges $85 for a service call plus $55 for each hour of service.  Y = 55x + 85  b/c slope is the repeating value -> $55 each hour  b/c y-int is the initial cost ($85)   |  |  | | --- | --- | | X (Hours) | Y (Cost)  + 55 | | 0 | 85 | | 1 | 140 | | 2 | 195 | |
| A truck rental company charges $130 flat rate to rent a truck, plus $0.75 per km driven.  + 0.75  Y = 0.75 x + 130  b/c slope is the repeating value -> $0.75 per km  b/c y-int is the initial cost ($130)   |  |  | | --- | --- | | X (Km Driven) | Y (Cost) | | 0 | 130 | | 1 | 130.75 | | 2 | 131.50 | |
| Freida got $75 for her birthday from her Grandma. She gets $13 a week as an allowance for doing chores around the house. She is trying to save money.  Y = 13 x + 75  b/c slope is the repeating value -> $13 each week  b/c y-int is the initial amount she had ($75)   |  |  | | --- | --- | | X (Weeks) | Y (Savings) | | 0 | 75  + 13 | | 1 | 88 | | 2 | 101 | |
| Jimmy works for Koodo and sells phone plans at the mall. He makes $630 a week plus $17 for every customer he sells a new plan to.  + 17  Y = 17 x + 630  b/c slope is the repeating value -> $17 for each customer  b/c y-int is the amount paid even if there are no customers (when x = 0, y = 630)   |  |  | | --- | --- | | X (Customers) | Y (Savings) | | 0 | 630 | | 1 | 647 | | 2 | 664 | |
| 1. A boat rental costs $215 for a 2-hour rental. It costs an additional $62 per hour if rented for longer. 2. Create a table of values showing the cost of the boat rental for an additional 1, 2 and 3 hours 3. Write an expression to find the cost of renting the boat for an additional *h* hours. 4. How much would it cost to rent the boat for 6 hours? 5. How much would it cost to rent the boat for 8 hours? |
| 1. There are 350 suckers in Ms. Hallahan’s storage. She gives away 7 per day to students who are awesome. 2. Create a table of values to show how many suckers she has in her closet after 1, 2 and 3 days 3. Write an expression to show how many suckers she has in her cupboard after *d* days 4. Calculate the number of suckers she has after 18 days. 5. Calculate the number of suckers she has after 35 days |
| 1. Ned works in sales and makes commission. This means he makes a little bit of money each time he sells a product. His normal salary is $42, 500 and he makes $840 on each sale of a car. 2. Create a table of values to show his income if he sells 1 car, 2, cars or 3 cars. 3. Write an expression to show his salary if he sells *c* cars 4. Calculate how much he makes if he sells 24 cars 5. Calculate his salary is he sells 55 cars |
| 1. To buy a flower arrangement costs a base price of $37. It costs an additional $3.75 for each additional flower added to the bouquet. 2. Create a table of values to show the price of the bouquet with 1 additional flower, 2 and 3. 3. Write an expression to show the cost of the bouquet for *f* flowers. 4. Calculate the cost of the bouquet with 15 additional flowers. 5. Calculate the cost of the bouquet with 8 additional flowers. |
| 1. Morty quit his job and has $5400 in his bank account. He knows it can be tricky to find another job, so wants to see how long he can live off his savings. It costs him $945 each week to live (ie: pay for rent, groceries, internet etc.). 2. Create a table of values to show how much money Morty will have in his bank account after 1 week, 2 weeks and 3 weeks without his job 3. Write an expression to show how much money he would have in his bank account at each *w* week since he quit his job. 4. Calculate how much money he would have in his account after 5 weeks without his job 5. Calculate how much money he would have in his account after 8 weeks without his job |