LINEAR FUNCTION WORD PROBLEMS

Linear functions can be represented in slope-intercept form:

$$y = mx + b$$

The **slope**, *m*, is the constant rate of change. | The **y-intercept**, *b*, is the value of *y* when *x* = 0.

Answer each question.

1. Chandler's monthly cell phone plan costs $20 plus $5 per gigabyte of data that he uses. Write an equation in slope-intercept form to represent this linear function.

If Chandler uses 3 gigabytes of data this month, how much will his cell phone bill be?

2. A membership at Rocky Heights Climbing Gym costs $65 per month plus a $40 initial fee. Write an equation in slope-intercept form to represent this linear function.

Meg gets a membership that lasts 6 months. How much does she pay?

3. Luna's soccer team always starts practice with a 12 minute warm-up. Then, the team spends 6 minutes practicing each drill. Write an equation in slope-intercept form to represent this linear function.

If tomorrow's practice is 60 minutes long, how many drills can Luna's team practice?

4. Vijay is saving up to buy a tablet. He already has $100 saved, and he plans to save $15 each week going forward. Write an equation in slope-intercept form to represent this linear function.

The tablet Vijay wants to buy is $220. How many weeks will it take him to save enough for the tablet?

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Keep going! Answer each question.

5. Nya is going bowling with some friends. They go to Bo's Bowl-O-Rama, where it costs $40 to rent a lane plus $3 per person for shoe rentals. Write an equation in slope-intercept form to represent this linear function.

Nya and three of her friends went bowling. What is the total amount Nya and her friends paid to bowl?

6. Felix is writing a novel. He already has 74 pages of the novel written, and he sets a goal to write 25 additional pages each day. Write an equation in slope-intercept form to represent this linear function.

Felix meets his writing goal every day for a week. How many pages of the novel does he have written now?

7. Sky Launch Trampoline Park charges customers $9.50 per hour they spend jumping. Each customer must also pay $2.50 for grip socks. Write an equation in slope-intercept form to represent this linear function.

Derrick spent $31 at Sky Launch Trampoline Park on Sunday. How many hours did he jump?

8. Harper's family rented a car for their cross-country vacation. They paid $77 each day for the car, plus $33.50 in fees. Write an equation in slope-intercept form to represent this linear function.

Harper's family spent a total of $726.50 on the car rental. How many days did they rent the car?