

# 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.

$$y = 5x + 20$$

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

**\$35**

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.

$$y = 65x + 40$$

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

**\$430**

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.

$$y = 6x + 12$$

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

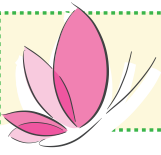
**8 drills**

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.

$$y = 15x + 100$$

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

**8 weeks**



# LINEAR FUNCTION WORD PROBLEMS



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.

$$y = 3x + 40$$

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

**\$52**

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.

$$y = 25x + 74$$

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

**249 pages**

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.

$$y = 9.50x + 2.50$$

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

**3 hours**

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.

$$y = 77x + 33.50$$

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

**9 days**