

Writing and evaluating a function that models a real-world situation: Basic: Worksheet 9.3

Name Date Score

1. Joan is putting \$270 in a savings account and adding \$50 each week. Let S represent the total amount saved and let w represent the number of weeks Joan has been adding money. Write an equation relating S and w and use it to find the total amount after 15 weeks.
2. Mountain Car Rentals charge a base price of \$80 and a \$15 per hour for renting cars. Let T represent the total bill amount and h be number of hours the car is rented. Write an equation relating T and h and use it to find the total amount after 8 hours.
3. Eva has walked 24 kilometers, further she plans to walk 2 kilometer during each trip to work. Let T be the total distance walked and t be the number of trips she makes. Write an equation an equation in T and t and use it to find T after 9 trips to work.
4. Linda has already written 30 pages and she writes 6 pages per hour. Let P be the total pages written and h the number of hours she writes. Write an equation in P and h and use it to find total pages Linda has written in all after 5 hours.
5. Ryan has already taken 28 tests, and he has 2 tests during each week of this semester. Let T be the total number of tests taken and w be the number of weeks. Write an equation relating T and w and use it to find the number of weeks Ryan has to attend this semester before he will have taken a total of 46 tests.
6. Tom's party costs \$120 plus \$9 for every guest he invites. Let A be the total cost of party and g be the number of guests. Write an equation in A and g and find number of guests attending if Tom spent a total of \$219 on the party.
7. Natasha already has 9 bracelets, and new bracelets are priced \$6 each. Let B be the total number of bracelets and b be the number of new bracelets. Write an equation in B and b . With \$42 to spend on new bracelets, find how many total bracelets can Natasha own,
8. Jim has savings of \$70 and he earns \$5 for each hour of lawn mowing. If A is the amount with Jim and h is the number of hours he works, write and equation in A and h . Find how much amount he has after 6 hours of mowing lawn.



Solutions: Worksheet 9.3

- Charlie has made 18 liters of jam and will make an additional 2 liter of jam every day. If J is the number of liters of jam made and d is the number of days, find an equation relating J and d . Find J if Charlie worked for 4 days.
- Bill has 9 stamps and buys 2 stamp during each day of vacation. Let S be the total number of stamps Bill has and d be the days of vacation. Write an equation in S and d and use it to find the number of days Bill has to spend on vacation before he has 15 stamps.

Solutions: Worksheet 9.3

- $S = 270 + 50w$; $S = \$1020$
- $T = 80 + 15h$; $T = \$200$
- $T = 24 + 2t$; $T = 42$ km
- $P = 30 + 6h$; $P = 60$ pages
- $T = 28 + 2w$; $w = 9$ weeks
- $A = 120 + 9g$; $g = 11$ guests
- $B = 9 + b$; $B = 16$ bracelets
- $A = 70 + 5h$; $A = \$100$
- $J = 18 + 2d$; $J = 26$ liters
- $S = 9 + 2d$; $d = 3$ days

