Writing and evaluating a function that models a real-world situation: Basic: Worksheet 9.1

Name .... Date .... Score ....

1. Joan is putting $300 in a savings account and adding $40 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 12 weeks.

2. Mountain Car Rentals charge a base price of $100 and a $20 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 9 hours.

3. Eva has walked 25 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 6 trips to work.

4. Linda has already written 37 pages and she writes 8 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 3 hours.

5. Ryan has already taken 21 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 35 tests.

6. Tom's party costs $100 plus $8 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 $172 on the party.

7. Natasha already has 6 bracelets, and new bracelets are priced $5 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 $45 to spend on new bracelets, find how many total bracelets can Natasha own.

8. Jim has savings of $50 and he earns $4 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 3 hours of mowing lawn.

9. Charlie has made 12 liters of jam and will make an additional 1 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 5 days.

10. Bill has 5 stamps and buys 2 stamps 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 13 stamps.

Solutions: Worksheet 9.1

1. S = 300 + 40w; S = $780 after 12 weeks

2. T = 100 + 20h: T = $280

3. T = 25 + 2t; T = 37 km

4. P = 37 +8h; P = 61 pages

5. T = 21 + 2w; w = 7 weeks

6. A = 100 + 8g; g = 9 guests

7. B = 6 + b; B = 15 bracelets

8. A = 50 + 4h; A = $62

9. J = 12 + 1d; J = 17 liters

10. S = 5 + 2d; d = 4 days