Name:

1. Ashley has one more than twice as many puppies as Melissa. Let *m* stand for the number of puppies Melissa has. The function *a*(m) represents the number of puppies Ashley has.

Which of the following equations describes the relationship between m and a(m)? (circle one)

a(m) = ½m + 1 *a*(m) = 1 + ½m *a*(m) = 1m + 2 *a*(m) = 2m+1

2. Asha is making bumper sticker to run for office. The total cost is a one-time fee of $20 to have the stickers designed, plus $0.50 per printed sticker. Write an equation that Asha can use to determine the total cost *C*(s), in dollars, to make *s* stickers.

C(s) = _____

3. A principal wants to take the entire school on a field trip. The school has enough vans to transport 20 students, and will have to rent buses to take the rest. Each of the buses can carry up to 40 students. If *b* represents the buses the principal orders, write a function s(*b*), which shows the number of students *s* that can be transported if the school orders *b* buses in addition to their vans.

a. What are the domain and range of s?

s : _____ → _____

b. Can you write two examples using this function?

c. Write the function `s(b),` *that represents the number of students that can be transported on vans and buses.*

s(b) = _____

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4. Gabrielle and Damoni are frosting cakes for a bake sale. Gabrielle can frost a cupcake in half the time it takes Damoni. A function g(*d*) represents the time it takes Gabrielle to frost a cupcake, compared to Damoni.

a. What are the domain and range of g?

g : _____ → _____

b. Can you write two examples using this function?

c. Which of the following equations describes the relationship between d and g*(d)? (circle one)*

$g(d) = 2 \times d$ $g(d) = 2 \div d$ $g(d) = d - 2$ $g(d) = d \div 2$

5. A train moves 50mph faster than twice the speed of the world's fastest human. Let *h* represent the speed of the runner. A function t(*h*) represents the speed of the train, in relation to the speed of the runner.

a. What are the domain and range of t?

t : _____ → _____

b. Can you write two examples using this function?

c. Which of the following equations describes the relationship between d and t*? (circle one)*

$t(h) = 50 - 2h$ $t(h) = 50h + 2$ $t(h) = 2h - 50$ $t(h) = 2h + 50$

6. The total for a phone bill, *t*(m), starts at $19, plus an additional $0.25 per minute *m* of use.

a. Write the function `t(m),` *that represents the total bill given a certain number of minutes.*

t(m) = _____