Name _____ Date _____

Math 8R Period _____

Real World Functions – Day 2

1. A social networking site charges $40 for 2,000 page views of a banner advertisement. The site also charges $100 for 5,000 page views of a banner advertisement.

a) Determine the rate of change for the function. _____

b) Explain what the rate of change means in terms of this scenario.

_____

_____

c) Determine the y-intercept for the function. _____

d) Explain what the y-intercept means in terms of this scenario.

_____

_____

e) Write the equation for the function. _____

2. Shantell saves the same amount of money each month in her bank's savings account. The amounts of money she has saved after different number of months are shown in the following table.

Months of Saving, x	Total Amount Saved (in $), y
4	1100
6	1400
8	1700
10	2000

a) Determine the rate of change for the function. _____

b) Explain what the rate of change means in terms of this scenario.

_____

_____

c) Determine the y-intercept for the function. _____

d) Explain what the y-intercept means in terms of this scenario.

_____

_____

e) Write the equation for the function. _____

3. Elizabeth can choose from several monthly cell phone plans. The cost of each plan is a linear function of the number of minutes that are included in the plan. The table below represents the cost for the cell phone plan.

Minutes Included, x	100	200	300	400	500
Cost of Plan ($), y	18	28	38	48	58

a) Write an equation in slope-intercept form that represents the function.

b) Use the equation to predict the cost of a cell phone plan that includes 175 minutes.

c) What is the base price for any cell phone plan, regardless of how many minutes are included?

4. When Eduardo works for 3 hours at his job, he earns a total of $28.50. When he works for 5 hours, he earns a total of $47.50.

Create the equation for a function to represent the linear relationship between the number of hours Eduardo works and the total amount of money he earns.

5. A cell-phone company charges its customers different amounts according to customers' usage, as shown in the following table.

Hours of Usage (x)	Total Charges (in $) (y)
3	37
5	45
7	53
10	65

a) Determine the hourly rate the cell-phone company charges its customers. _____

b) Determine the cost of using the cell-phone for 0 hours. _____

c) Write the equation for the function _____

6. The rate at which crickets chirp is a linear function of temperature. At 59°F, they chirp 76 times per minute and at 65°F, they chirp 100 times per minute.

a) Write an equation in slope-intercept form that represents the function.

b) Predict the number of chirps per minute when the temperature is 72°F.

7. A catalog company charges a shipping fee of $0.25 for each pound an order weighs. A $3 handling fee is also charged. Which function represents the total fees for an order of p pounds?

a) $f(p) = 0.25 + 3p$ b) $f(p) = 0.25p + 3$
c) $f(p) = 0.25(p + 3)$ d) $f(p) = p(0.25 + 3)$

8. It costs $6 to park a car in a lot and $1.50 per hour to keep it there. Which function represents the total cost to have a car parked in this lot for h hours?

a) $f(h) = 1.5 + 6h$ b) $f(h) = 1.5h + 6$
c) $f(h) = 1.5(h + 6)$ d) $f(h) = h(1.5 + 6)$