Classwork/Homework Task: Talk is Cheap!

Name_____ Class Period_____

To encourage communication between parents and their children and to prevent children from having extremely large monthly bills due to additional minute charges, two cell phone companies are offering special service plans for students.

Talk Fast cellular phone service charges $0.10 for each minute the phone is used.
Talk Easy cellular phone service charges a basic monthly fee of $18 plus $0.04 for each minute the phone is used.

Your parents are willing to purchase for you one of the cellular phone service plans listed above. However, to help you become fiscally responsible they ask you to use the following questions to analyze the plans before choosing one.

1. How much would each company charge per month if you talked on the phone for 100 minutes in a month? How much if you talked for 200 minutes in a month?

2. Build a table, make a graph, and write a function rule, f(x) or g(x), to represent the cost of each cellular service in terms of the number of minutes, x.

Tables:

Talk Fast: $f(x) =$

(numbers of minutes) x	50	100	150	200	250	300	350	400
(cost in dollars) f(x)								

Talk Easy: g(x) =

(numbers of minutes) x	50	100	150	200	250	300	350	400
(cost in dollars) g(x)								

Use the table, graph, and/or rule to help answer the following questions:

3. Which company would be a better financial deal if you plan to use the phone for 200 minutes a month? Explain your reasoning.

4. Which company would be a better financial deal if you plan to use the phone for 500 minutes a month? Explain your reasoning.

5. Depending on the number of minutes you talk on the phone each month, explain to your parents which cellular phone plan is more economical. Include in your explanation the point at which both cellular phone plans cost the same amount of money.

6. If you know the cost of each plan for 300 minutes, can you double this cost to find the cost for 600 minutes? Explain your answer.

7. Should you connect the points on your graphs? Is the data discrete or continuous?

8.   f(100)=   g(150)=

        f(250)=   g(200)=

        x= ____,f(x)= 35   x=____, g(x)= 20

        x= ____,f(x)= 40   x=____, g(x)= 34

9. Where do the two graphs intersect? Show this algebraically. (HINT: set equations equal)

10. What does the point of intersection mean?