**Senior Math**  Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*HW-Cell Phone Applications #2* Hr\_\_\_\_\_\_\_\_\_\_\_

For #1-2, determine which cell phone plan would be a cheaper option. Make sure to calculate the cost of each before you make your decision. After, graph both plans and find the # of talking minutes when both plans are the same price.

1. A) Rachel talks on average 585 minutes per month.

Plan A: $40 monthly charge, 300 minutes included, $0.14/min after 300

Plan B: $30 monthly charge, 400 minutes included, $0.20/min after 400

Circle the Cheaper Option A B

B) Write the piecewise equations for both plans. C) Graph both cell phone plans.

Plan A:



Plan B:



D) Find the # of talking minutes when both plans are the same price.

E) When would plan A be cheaper? When would plan B be cheaper?

1. A) Kevin talks on average 439 minutes per month.

Plan A: $20 monthly charge, no minutes included, $0.08/min

Plan B: $35 monthly charge, 300 minutes included, $0.15/min after 300

Circle the Cheaper Option A B

B) Write the piecewise equations for both plans. C) Graph both cell phone plans.

Plan A:



Plan B:



D) Find the # of talking minutes when both plans are the same price.

E) When would plan A be cheaper? When would plan B be cheaper?

Use this scenario for #3- 10: You sign a contract for a cell phone plan. The contract states that you pay $25 per month for the first 300 minutes and then pay $0.13/min for all minutes after 300.

1. How much would the bill be if you talk 0 minutes?
2. How much would the bill be if you talk 520 minutes?
3. If your bill is $44.37, how many minutes did you use?
4. If you talk for an average of 314 minutes per month for the first year, how much money total did you pay for your cell phone during that first year?
5. You know that you do not want to pay over $50 per month for your cell phone plan. Knowing this you need to keep the number of minutes you talk within what interval?
6. Write a piecewise rule for the scenario. Be sure to include you domain with your equations.

|  |  |
| --- | --- |
| x | y |
| 100 |  |
| 200 |  |
| 300 |  |
| 400 |  |
| 500 |  |

1. Fill in the table below. 10. Graph the function below.