



Part 1: Carlos is thinking of changing cell phone plans so he is comparing several different plans.

- Plan 1) Pay as you go plan \$0.99 per minute
- Plan 2) \$30 monthly fee plus \$0.45 per minute
- Plan 3) \$40 monthly fee plus \$0.35 per minute
- Plan 4) \$60 monthly fee plus \$0.20 per minute
- Plan 5) \$100 monthly fee for unlimited minutes

What will Carlos need to consider to make his decision?

How can Carlos figure out which plan is best for him?



Part 2: Help Carlos compare the cell phone plans. Write an **expression** to describe a plan's cost.

Use  $m$  to represent the number of minutes Carlos talks.

Plan 1) Pay as you go plan \$0.99 per minute \_\_\_\_\_

Plan 2) \$30 monthly fee plus \$0.45 per minute \_\_\_\_\_

Plan 3) \$40 monthly fee plus \$0.35 per minute \_\_\_\_\_

Plan 4) \$60 monthly fee plus \$0.20 per minute \_\_\_\_\_

Plan 5) \$100 monthly fee for unlimited minutes \_\_\_\_\_

1) Using several different minute amounts, calculate the cost of each plan. Complete the chart below using your expressions.

Expression Number of minutes	PLAN 1	PLAN 2	PLAN 3	PLAN 4	PLAN 5
0					
50					
100					
150					
175					
200					
250					

2) Analyze your chart. Which plan should Carlos choose and why?



Part 3: Carlos figures he will have \$100 to spend using his allowance and what he earns from his paper route. Compare how long he would be able to talk with each of the cell phone plans.

- 1) Rewrite your expressions for each plan as equations that can calculate the cost as a function of minutes used. If Carlos wants the cost to be \$100 per month, how many minutes will he be able to talk with each plan?

	Equation <i>Cost as a function of minutes used</i>	Work space If Cost must be \$100, let $C=100$ , find $m$ .	Solution <b>Number of minutes</b>
Plan 1			
Plan 2			
Plan 3			
Plan 4			
Plan 5			

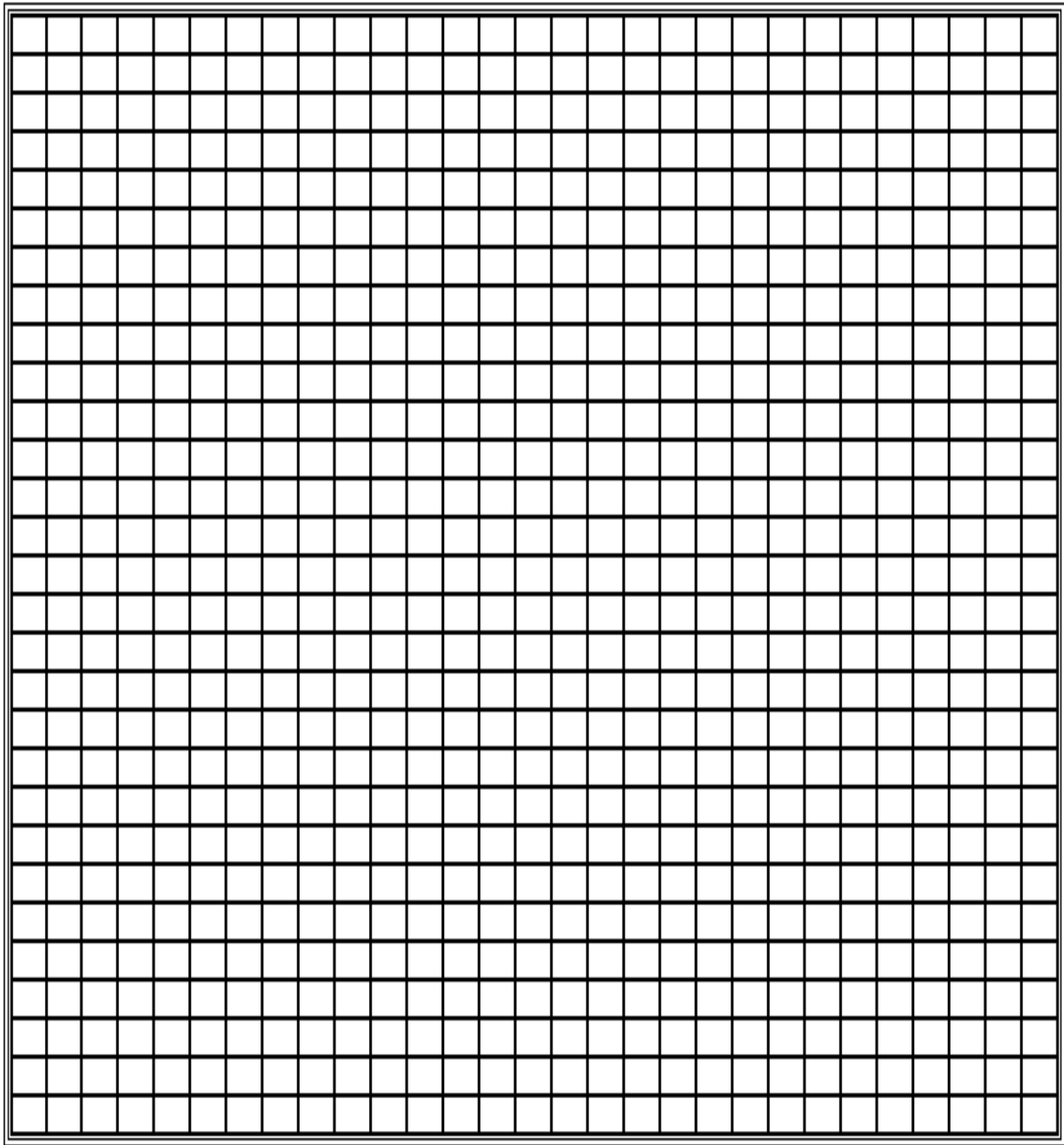
2. Analyze your solutions. Which plan should Carlos choose and why?



Part 4: Carlos is still confused about his decision and wonders if a graph might help make the comparison clearer.

1) Use your results from Part 2 and plot the information on a line graph. Use a different color for each plan.

- Plan 1) Pay as you go plan \$0.99 per minute (green)
- Plan 2) \$30 monthly fee plus \$0.45 per minute (red)
- Plan 3) \$40 monthly fee plus \$0.35 per minute (orange)
- Plan 4) \$60 monthly fee plus \$0.20 per minute (blue)
- Plan 5) \$100 monthly fee for unlimited minutes (black)



Plan Cost

Number of Minutes