

Mobile phone worksheet

Background

The spreadsheet shows the start of a mobile phone model that you are going to develop. The estimated number of minutes used per month can be entered in cell B5 as shown.

- 1 Ensure you have file 8.4P2b Mobyphone 1.xls loaded (as shown).

Mobyphone mobile phone model						
	Enter minutes					
	300	←	Enter number from 100 to 600			
TARIFF OPTIONS (monthly)						
	Monthly cost	Free minutes	Extra minutes	Minutes used	Cost for extra minutes	Total cost
Talk 15	£10.00	15	£0.06	300		
Talk 30	£12.50	30	£0.05	300		
Talk 45	£15.00	45	£0.04	300		
Talk 60	£17.50	60	£0.03	300		
Timefree Talk	£30.00	0	£0.00	300		
Pay As You Go	£0.00	0	£0.08	300		
Assumptions						
Questions						

- 2 Change the number of minutes in cell B5. What happens to the values in column E under the 'minutes used' heading? Why does this happen?

- 3 What do cells E11 to E16 contain?

- 4 You need to create a formula in G11 that calculates the cost of extra minutes used for the Talk 15 tariff. Work out what the formula needs to calculate. Write it in words and then as a spreadsheet formula.

- 5 Now enter this formula in G11. Remember the = sign at the start. Does your answer look reasonable? Check it.
- 6 Copy your formula into G12 to G16. You could use the fill handle. Check that the formula has been copied and that the cell references have changed for each of the rows.
- 7 Add a formula in cell H10 to calculate the total cost per month for the Talk 15 tariff. Check if it appears to be correct. Copy the formula down into cells H11 to H16.
- 8 If you use 400 minutes per month, which tariff do you think gives the best value? How much would you pay?
- 9 Use your model to complete the following table to test out your prediction.

Estimated number of minutes	Best-value tariff
100	
200	
300	
400	Talk 60
500	

- 10 You have a budget of £20 per month. How many minutes would this buy on the following plans? You could use Goal Seek... to help you find out.

Tariff	Number of minutes for £20
Talk 15	
Talk 30	
Pay As You Go	
Talk 60	

- 11 What are the most important factors for you to think about when you choose a phone?