

Piecewise Functions: The FogBugz Pricing Cliff

FogBugz was a software development ticket tracking service used by software companies (the name changed to Manuscript in 2018 along with the pricing plan). Below are the pricing tiers used by FogBugz. Note that these are not per-user prices. You would pay \$20/mo whether you had 1 user or 5 users. As soon as you had 6 users, you would pay \$100/mo.

- Up to 5 users, \$20 a month
- Up to 10 users, \$100 a month
- Up to 20 users, \$200 a month
- Up to 50 users, \$400 a month

- a) Make a table showing how much you would pay per month based on n , the number of people in your company who plan to use FogBugz. Then calculate the monthly cost per user for each n .

| n | Monthly Cost for Premium Spotify $M(n)$ | Monthly Cost per user $C(n)$ |
|-----|--|---------------------------------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 20 | | |
| 21 | | |
| 50 | | |
| 51 | | |

- b) Sketch a graph of the monthly cost $M(n)$ and write a piecewise function to represent it.
- c) Sketch a graph of the monthly cost per user $C(n)$ and write a piecewise function to represent it.
- d) With this pricing scheme, why was it difficult for FogBugz to convince companies to jump to the next tier of pricing?