



What is a 6-Figure Salary?



People often use generic terms like 5-figures or 6-figures to describe a salary. These phrases refer to the number of digits in a salary. A 5-figure salary means someone earns approximately \$10,000, whereas a 6-figure salary means someone earns closer to \$100,000.

1. Why do you think salaries are sometimes referred to by their “figures”?
2. If someone earns a 7-figure salary, what would you approximate their salary to be?
3. The table shows the relationship between a salary in dollars and a salary in figures.
 - a. Complete the table.

Salary (in \$)	1000	10,000	100,000	
Salary (in Figures)	4			7

- b. Does increasing from a 5-figure to a 6-figure salary have the same effect as increasing from a 6-figure to a 7-figure salary? Why or why not?
 - c. Describe how the salary in dollars is changing and how the salary in figures is changing. What does this tell you about the relationship between the two variables?
 - d. Write an equation that describes the relationship between the salary in dollars, d , and the salary in figures, f .
4. This rough description of salaries does not account for differences between a \$100,000 salary and an \$800,000 salary since both have 6 digits. However, these numbers represent vastly different salaries! Can we get a more precise number of figures?
 - a. Rodrigo says a \$500,000 salary could be considered a 6.5 figure salary. Do you agree or disagree? Explain.
 - b. How many “figures” is a \$320,000 salary?

Lesson 5.8 – Modeling with Logarithmic Functions

QuickNotes

Check Your Understanding

1. Dextromethorphan, the chemical in DayQuil, has a half-life of 3 hours. Suppose you take a single dose of DayQuil, which has 20 mg of Dextromethorphan.
 - a. Write a function for $G(h)$ that gives the number of milligrams remaining after h hours.
 - b. After how many hours will there be only 5 mg of Dextromethorphan remaining in your system? Explain your reasoning.
 - c. After how many hours will there be 16 mg of Dextromethorphan remaining in your system? Explain your reasoning.
 - d. Write a function for $H(g)$ that gives the number of hours until g milligrams of the initial dose remain in your system.
2. A logarithmic function f has an x-intercept at $x = 4$ and passes through the point (11,6). If the equation for f can be written as $f(x) = a \log_2(x - h)$, for some constants a and h , find the values of a and h .