

1) Let $f(x) = x + 3$. Find and simplify:

$$\frac{f(x) - f(a)}{x - a}$$

$$\frac{f(x) - f(a)}{x - a} = \frac{x + 3 - (a + 3)}{x - a} = \frac{x + 3 - a - 3}{x - a} = \frac{x - a}{x - a} = 1$$

2) Find $\log_9(81)$

$$\log_9(81) = \log_9(9^2) = 2$$

3) A graph of $f(x)$ is given below. On the same axis, sketch a graph of $y = -\frac{1}{2}f(x) + 1$.

