

11. From the graph, $f(2) = a^2 = 9$, so $a = 3$. Thus $f(x) = 3^x$.

13. From the graph, $f(2) = a^2 = \frac{1}{16}$, so $a = \frac{1}{4}$. Thus $f(x) = \left(\frac{1}{4}\right)^x$.

15. III

17. I

19. II

21. $f(x) = -3^x$

The graph of f is obtained by reflecting the graph of $y = 3^x$ about the x -axis.

Domain: $(-\infty, \infty)$

Range: $(-\infty, 0)$

Asymptote: $y = 0$

