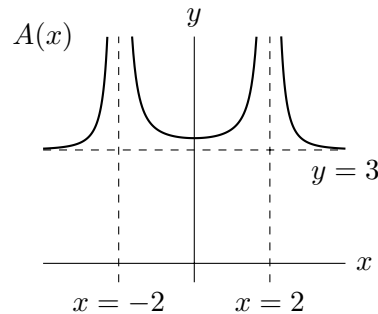**1**. [9 points]

a. [4 points]

Let $A(x)$ be the function graphed below with end behavior shown. $A(x)$ has vertical asymptotes at $x = -2$ and $x = 2$, and it has a horizontal asymptote at $y = 3$.

Find the domain and range of $\ln(A(x))$. Give your answer in interval notation, using exact form for any numbers in the endpoints of your interval(s).

The domain of $\ln(A(x))$ is _____ $(-\infty, -2) \cup (-2, 2) \cup (2, \infty)$ _____ .

The range of $\ln(A(x))$ is _____ $(\ln(3), \infty)$ _____ .

b. [5 points]

The table below has some values of the function $B(t)$.

t	0	1	3	7	8	9	11
$B(t)$	3	2	6	4	12	3	1

Find all solutions of the equation

$$(B(t))^2 - 7B(t) + 12 = 0$$

that can be determined using only the information in the table above. Circle your final answer(s).