

Answer on Question #53942 – Math – Calculus

Question

Find the limit of the function algebraically.

limit as x approaches negative four of quantity x squared minus sixteen divided by quantity x plus four.

Solution

$$\lim_{x \rightarrow -4} \frac{x^2 - 16}{x + 4} = \lim_{x \rightarrow -4} \frac{(x - 4) * (x + 4)}{x + 4} = \lim_{x \rightarrow -4} (x - 4) = \lim_{x \rightarrow -4} (x) - \lim_{x \rightarrow -4} (4) = -4 - 4 = -8$$

Answer: -8.