

Investigating Limit

1. The 991-ID Plus is very effective to generate tables of values for function. The example below shows the function $f(x) = \frac{16-x^2}{4+x}$.

$$f(X) = \frac{16-X^2}{4+X}$$

Mulai? -5

Akhiri? 5

Langkah? 1

Look at carefully the values in the table beside, scroll down with \blacktriangledown to check another answer. What went **suspicious**? Discuss with your partner.

X	F(X)
-5	9
-4	ERROR
-3	7

2. Operate another value of the function, start with -5 , end up with -3 , with 0.1 step*. What can you see from the table of values?

X	F(X)
-5,1	8,1
-4	ERROR
-3,9	7,9

3. Operate another value of the function, start with $-4,1$, end up with $-3,9$, with $0,01$ step. What can you see from the table of values?

X	F(X)
-4,01	8,01
-4	ERROR
-3,99	7,99

4. Study the screens below to see that the limit of a function is available or not.

$$f(X) = \frac{1}{X-2}$$

X	F(X)
1,9	-1
2	ERROR
2,1	1

Repeating the steps on number (2) and (3), what can you find from this function?

5. Conclusions

What is a limit?

Is all function has limit value?

How can you find the value of limit*?