

Note. This is an open brain, open HHA, closed book, quiz. Please fill in the blanks. Show no work. Write expressions unambiguously e.g, “ $1/a + b$ ” should be bracketed either $[1/a] + b$ or $1/[a + b]$. (Be careful with **negative** signs!)

Q3: [Note The given parameters are length F and positint N .] A farmer has F feet of fencing with which he wishes to fence in a rectangular area, of some width w and depth d (for you to determine), and which is divided into N pens parallel to the width side. (So each pen has width w .) Let $A_N(w)$ denote the area of the big rectangle as a function of width. Compute this function:

$$A_N(w) = \underline{\hspace{2cm}}.$$

Let w_N and d_N be **the** dimensions which maximize total area. Then

$$w_N = \underline{\hspace{2cm}}.$$

Let α_N denote the maximum area $w_N \cdot d_N$. Then

$$\lim_{N \rightarrow \infty} \alpha_N = \underline{\hspace{2cm}}.$$

Q3: 50pts

Total: 50pts
Print name

Filename: Classwork/1Calculus/1Calc2001t/q3.1Calc2001t.latex
As of: Monday 31Aug2015. Typeset: 31Aug2015 at 10:06.

Note. This is an open brain, open HHA, closed book, quiz. Please fill in the blanks. Show no work. Write expressions unambiguously e.g, “ $1/a + b$ ” should be bracketed either $[1/a] + b$ or $1/[a + b]$. (Be careful with **negative** signs!)

Q3: [Note The given parameters are length F and positint N .] A farmer has F feet of fencing with which he wishes to fence in a rectangular area, of some width w and depth d (for you to determine), and which is divided into N pens parallel to the width side. (So each pen has width w .) Let $A_N(w)$ denote the area of the big rectangle as a function of width. Compute this function:

$$A_N(w) = \underline{\hspace{2cm}}.$$

Let w_N and d_N be **the** dimensions which maximize total area. Then

$$w_N = \underline{\hspace{2cm}}.$$

Let α_N denote the maximum area $w_N \cdot d_N$. Then

$$\lim_{N \rightarrow \infty} \alpha_N = \underline{\hspace{2cm}}.$$

Q3: 50pts

Total: 50pts
Print name

Filename: Classwork/1Calculus/1Calc2001t/q3.1Calc2001t.latex
As of: Monday 31Aug2015. Typeset: 31Aug2015 at 10:06.