NC EMPT's QUESTION of the week

Question 15
December 9, 2024

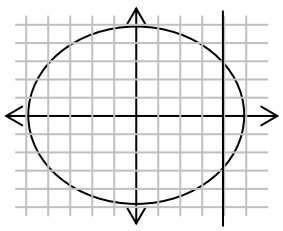
When $x = 2$, find the value of the expression: $\frac{-3|x-2|}{4}$

A. 3 B. 0 C. $-\frac{3}{4}$ D. -3 E. None of these.

Last Week's Answer

The graph of $x^2 + y^2 = 25$ and the graph of $x - 4 = 0$ are drawn on the same set of axes. A point of intersection of the graphs is:

A. $(5, 0)$ B. $(-4, -3)$ **C. $(4, -3)$** D. $(-3,4)$ E. $(4, -4)$



Solution:

The first equation represents a circle with standard form: $(x - 0)^2 + (y - 0)^2 = 5^2$. The circle has a center at $(0,0)$and a radius of 5units. The second equation represents the vertical line $x = 4$. The graphs intersect at two points: $(4,3)$ and $(4, -3)$.

Note that answers A, B, and D are solutions of the first equation, but not the second.

Each week, we'll reveal the answer to the previous week's question!

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