

NC EMPT'S  
**QUESTION?**  
*of the week*

Circle the one best answer. Justify your answer by showing all work below

27. Solve  $10x^2 = 5x$

- A.  $\left\{\frac{1}{2}\right\}$       B.  $\left\{\frac{1}{2}, 0\right\}$       C.  $\{2\}$       D.  $\left\{-\frac{1}{2}, 0\right\}$       E.  $\{0\}$

*Last Week's Answer*

26. When  $x = -3$ , find the value of this expression:  $5\sqrt{x+3} - 2 \cdot \frac{x-3}{x-3}$

- A.  $-3$       B.  $-2$       C.  $2$       D.  $3$       E. The value is undefined

**Solution:** Substitute  $-3$  for  $x$  in the expression. Simplify under the radical and take the square root. Remember that the correct order of operations involves multiplying or dividing from left to right (whichever comes first) and then subtracting.

$$\begin{aligned} 5\sqrt{x+3} - 2 \cdot \frac{x-3}{x-3} &= 5\sqrt{-3+3} - 2 \cdot \frac{-3-3}{-3-3} \\ &= 5\sqrt{0} - 2 \cdot \frac{-6}{-6} \\ &= 5 \cdot 0 - 2 \cdot 1 \\ &= 0 - 2 \\ &= -2 \end{aligned}$$

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

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