

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

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

28. If the average weight of four football players listed in the table below is 250 pounds, what is the weight, in pounds, of Player D?

Player	Weight in lbs
A	270
B	230
C	240
D	?

- A. 220                      B. 230                      C. 240                      D. 250                      E. 260

*Last Week's Answer*

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

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

**Solution:** This is a second degree quadratic equation. First set the equation equal to 0. As a first method of solution, try factoring. (As a second method of solution, the quadratic formula may also be used where  $a=10$   $b=-5$   $c=0$ .)

$$\begin{aligned}
 10x^2 &= 5x \\
 10x^2 - 5x &= 0 \\
 5x(2x - 1) &= 0 \\
 5x = 0 \text{ or } 2x - 1 &= 0 \\
 x = 0 \quad 2x &= 1 \\
 &x = \frac{1}{2}
 \end{aligned}$$

Note: Avoid dividing both sides of an equation by  $x$ . This is a dangerous move because  $x$  could have a value of 0. Division by 0 is undefined. In this equation, dividing both sides by  $x$  as a first step would cause you to lose the solution of 0.

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

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