NC EMPT'S QUESTION of the week

Question 13
November 25, 2024

Simplify this expression: $\frac{1}{2}\sqrt{112} - \sqrt{28} + 2\sqrt{63}$

A. $4\sqrt{7}$ B. $6\sqrt{7}$ C. $7\sqrt{7}$ D. $8\sqrt{7}$ E. $10\sqrt{7}$

Last Week's Answer

Simplify the complex fraction: $\dfrac{\frac{2}{x} + \frac{5}{y}}{\frac{2}{x} - \frac{5}{y}}$

A. $\frac{2y+5x}{2y-5x}$ B. $\frac{4}{xy}$ C. $-\frac{7}{3xy}$ D. $\frac{2y+5x}{x^2+y^2}$ E. -1

Solution: One method is to multiply the numerator and denominator of the complex fraction by the least common denominator of the four fractions found in the numerator and denominator.

$$\frac{\left(\frac{2}{x}+\frac{5}{y}\right)\cdot xy}{\left(\frac{2}{x}-\frac{5}{y}\right)\cdot xy} = \frac{\left(\frac{2}{x}\right)\left(\frac{xy}{1}\right)+\left(\frac{5}{y}\right)\left(\frac{xy}{1}\right)}{\left(\frac{2}{x}\right)\left(\frac{xy}{1}\right)-\left(\frac{5}{y}\right)\left(\frac{xy}{1}\right)} = \frac{2y+5x}{2y-5x}$$

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

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