VOLUME OF A CONE – CONSTRUCTED RESPONSE QUESTION

Four students wrote expressions to describe the volume of a cone. The cone has a height of 15 cm and a diameter of 8 cm. Each student made a different mistake. What mistake did each student make?

Dan used $V=π\left(4^{2}\right)\left(15\right).$ Jason used $V=\frac{1}{3}π(4)(15)$

Lucia used $V=\frac{1}{3}π\left(8^{2}\right)\left(15\right) $ Yolanda used $V=\frac{1}{3}π\left(15^{2}\right)(4)$

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| Dan forgot to multiply by $\frac{1}{3}$. Remember, multiplying by $\frac{1}{3}$ is the same as dividing by 3.Jason did not square the radius. It should read$ V=\frac{1}{3}π(4^{2})(15)$.Lucia squared the diameter instead of the radius. She must divide the diameter by 2 to get the radius which is 4.Yolanda squared the height instead of the radius. |