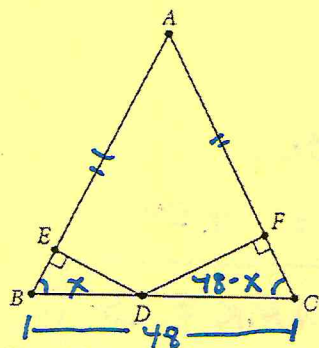




Note: Figure not drawn to scale.

$\triangle BDE \sim \triangle CDF$ AA similarity

$$\frac{5}{7} = \frac{x}{48-x}$$

$$7x = 5(48-x)$$

$$7x = 240 - 5x$$

$$12x = 240$$

$$x = 20$$

$$DC = 48 - 20 = 28$$

Triangle ABC above is isosceles with $AB = AC$ and $BC = 48$. The ratio of DE to DF is 5:7. What is the length of DC ?

A) 12

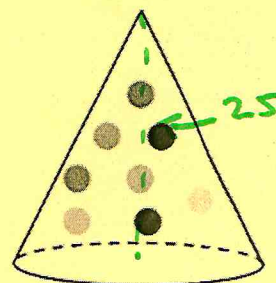
B) 20

C) 24

D) 28

Cam is making a party hat, shown at left, in the shape of a cone for his birthday. The circumference of the part of his head where the hat will rest is 56 centimeters (cm). If the height of the hat is 25 cm, which of the following is closest to the volume of Cam's hat, measured in cubic centimeters (cm^3)?

56 7?
2.5



A) 233 cm^3

B) $2,080 \text{ cm}^3$

C) $16,362 \text{ cm}^3$

D) $20,525 \text{ cm}^3$

$$C = 56$$

$$2\pi r = 56$$

$$r \approx 8.9$$

$$V = \frac{1}{3} Bh$$

$$= \frac{1}{3} \pi r^2 h$$

$$= \frac{1}{3} \pi (8.9)^2 (25)$$

$$= 2079.6 \text{ cm}^3$$