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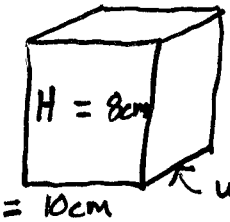
Date: May 29, 2020
Block: A

Math 7 Assignment Unknown Edges

Calculate the length of unknown edges

Given:
$Vol = 720 cm^3$



$$w = \frac{Vol}{l \cdot H}$$

$$= \frac{720 cm^3}{10cm \cdot 8cm}$$

$$= \frac{720 \cancel{cm} \cdot \cancel{cm} \cdot cm}{80 \cancel{cm} \cdot \cancel{cm}}$$

$$w = 9cm$$

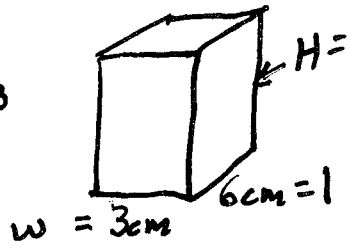
Solution / Manipulate

$$Vol = (A_o F B) \cdot H$$
$$= (A_o f R) \cdot H$$
$$= w \cdot l \cdot H$$

$$\frac{Vol}{l \cdot H} = \frac{w \cdot \cancel{l} \cdot \cancel{H}}{\cancel{l} \quad \cancel{H}}$$

$$\frac{Vol}{l \cdot H} = w \quad \text{or} \quad w = \frac{Vol}{l \cdot H}$$

Given:
$Vol = 180 cm^3$



Solution / Manipulation

$Vol = (A\ of\ B) \cdot H$
$= (A\ of\ R) \cdot H$
$= w \cdot l \cdot H$

$\frac{Vol}{w \cdot l} = \frac{\cancel{w} \cdot \cancel{l} \cdot H}{\cancel{w}\ \cancel{l}}$

$\frac{Vol}{w \cdot l} = H$ or $H = \frac{Vol}{w \cdot l}$

$H = \frac{Vol}{w \cdot l}$

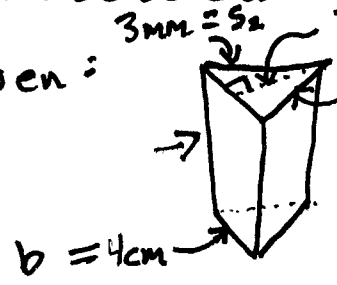
$= \frac{180\ cm^3}{3cm \cdot 6cm}$

$= \frac{180\ \cancel{cm} \cdot \cancel{cm} \cdot cm}{18\ \cancel{cm} \cdot \cancel{cm}}$

$= 10\ cm$

* Brain Teaser (can try to finish if want)

Given:



Solution / Manipulation

$Vol = (A\ of\ B) \cdot H$
$= (A\ of\ T) \cdot H$
$= \frac{b \cdot h}{2} \cdot H$

$2 \cdot Vol = \cancel{2} \frac{b \cdot h}{\cancel{2}} \cdot H$

$\frac{2 \cdot Vol}{b \cdot h} = \frac{\cancel{b} \cdot \cancel{h} \cdot H}{\cancel{b} \cdot \cancel{h}}$

then try

finish it