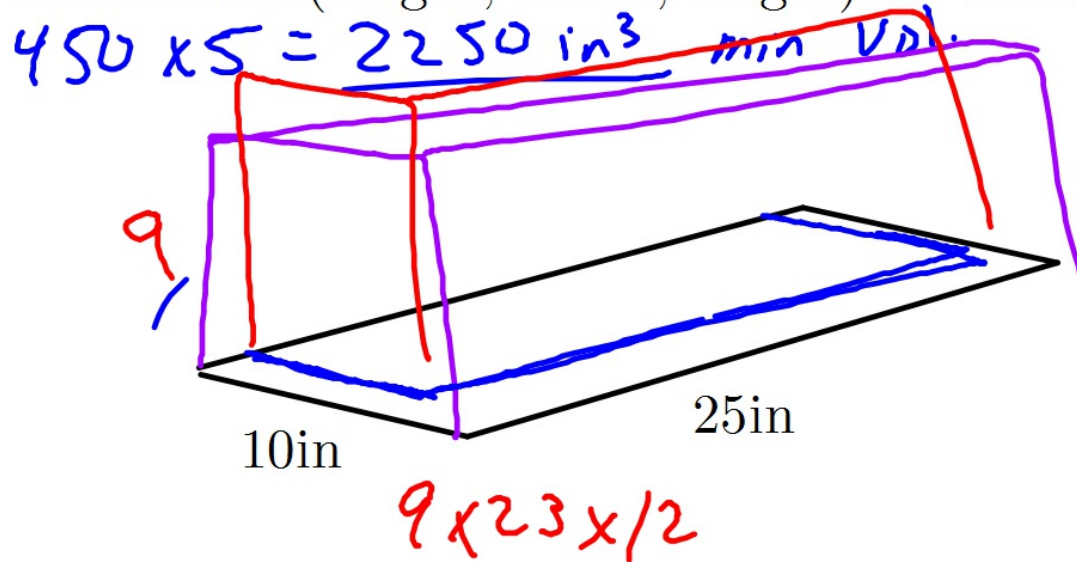


Good afternoon: attach warm up to notebooks

You're shopping for an aquarium. You want to have 5 fish and each requires at least  $450 \text{ in}^3$  of water to live safely. The shelf on which you wish to place it is 10 inches deep and 25 inches wide. Find possible dimensions (length, width, height) for a suitable aquarium.

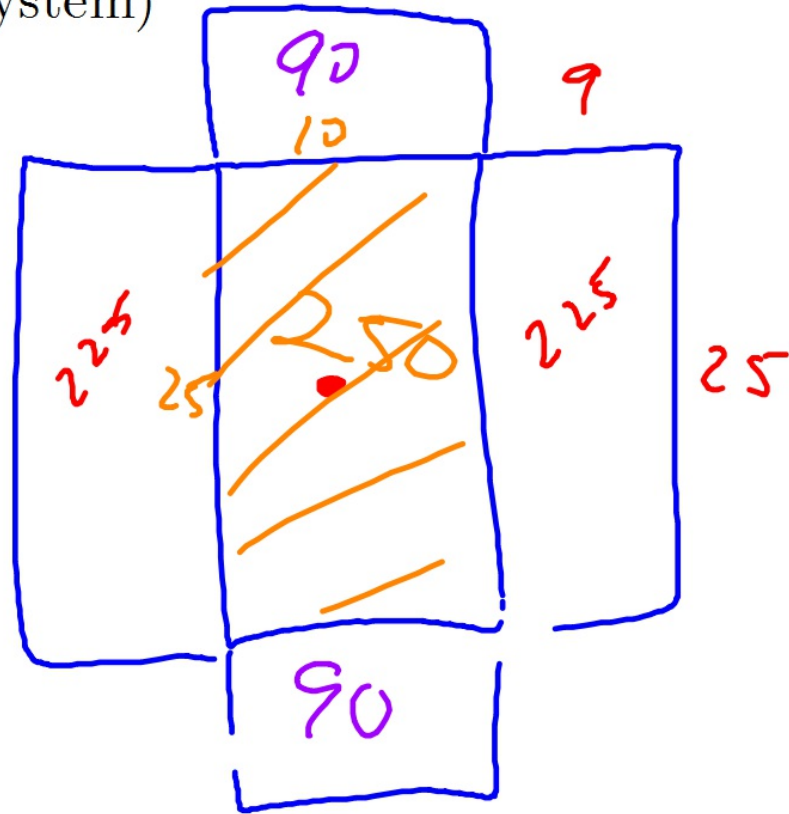
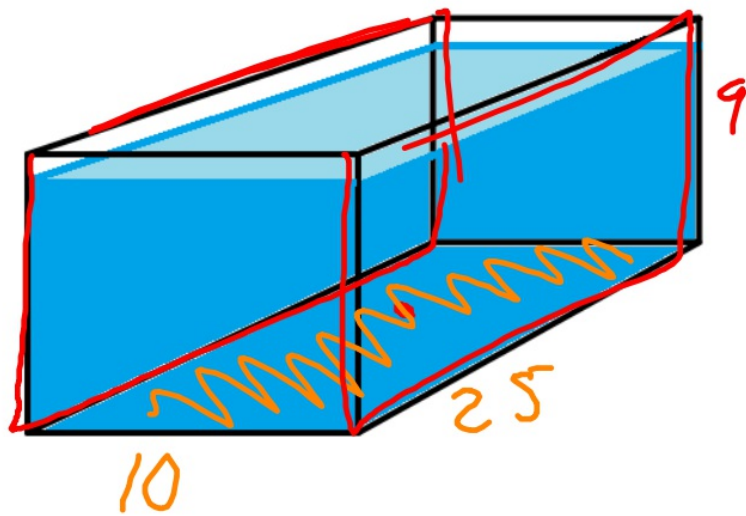


$$\begin{aligned} 2250 &= l \cdot w \cdot h \\ 2250 &= 10 \cdot 25 \cdot h \\ 2250 &= \frac{250h}{25} \\ 9 &= h \end{aligned}$$

Reminders

- assess on Thurs
- tutoring tmrw

Calculate the surface area of your aquarium where 5 sides are glass  
(the top is open for the filtration system)



HW

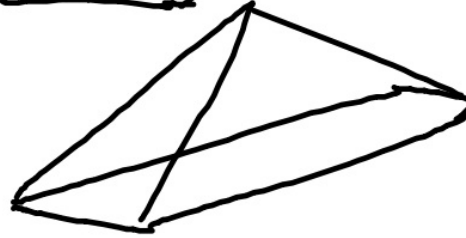
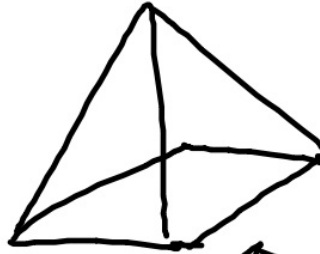
9. 126 cm<sup>3</sup>

11. 3870.72 lb

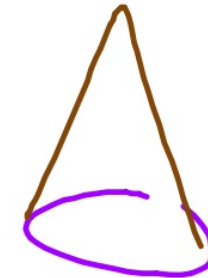
14. 1426.3 kg

p. 522

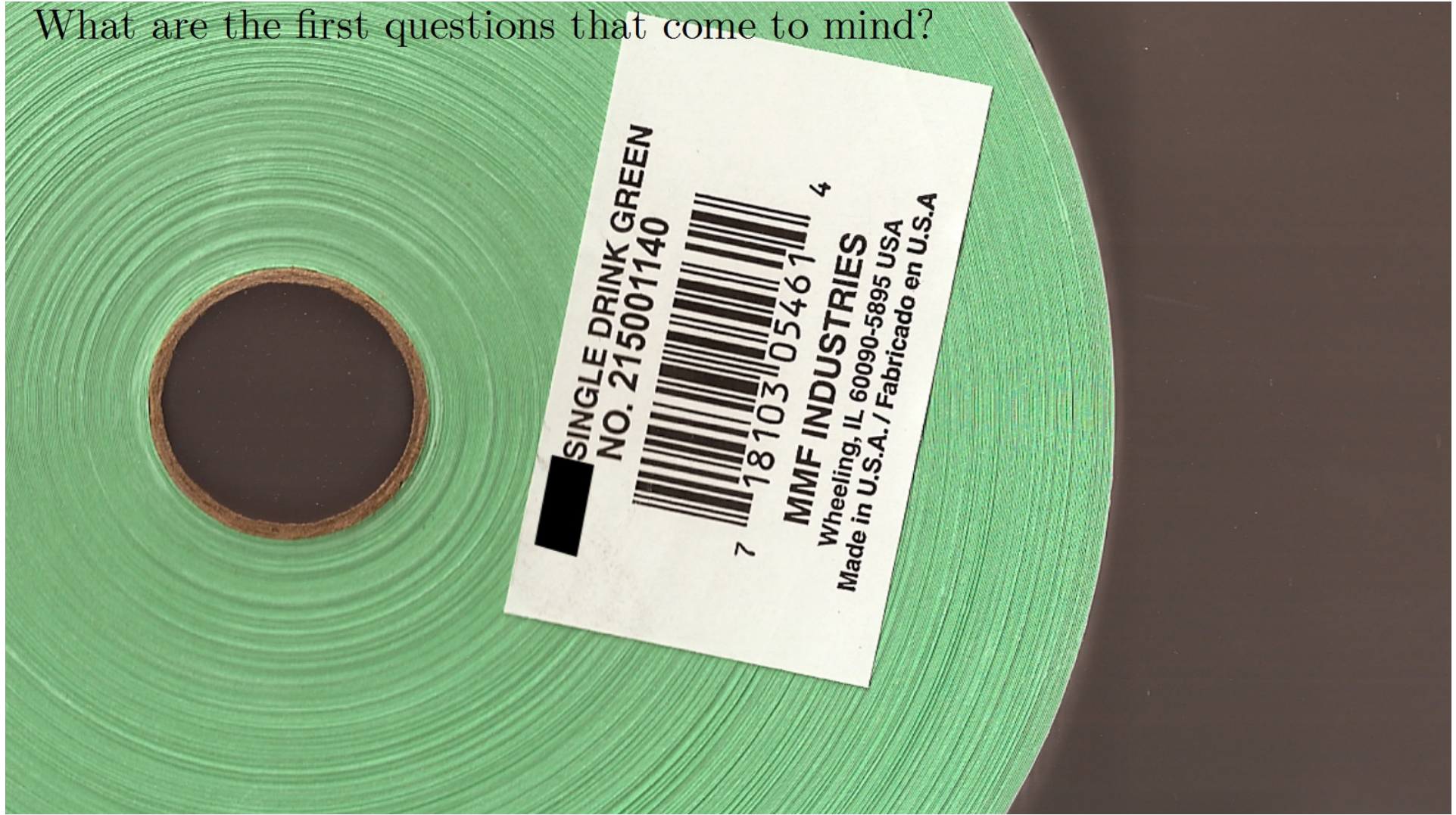
$$\text{Pyramid Volume} = \frac{1}{3} B \cdot h$$



area of  
bottom



What are the first questions that come to mind?



SINGLE DRINK GREEN  
NO. 215001140



7 18103 05461 4

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How many tickets are on the roll? Record your guess.



What do you need to know to answer this question?



All shown in millimeters

0.22 thick

25.03

168.65

$$V_{big} = \pi (84.-)^2 \cdot 25.03$$

$$V_{big} = 559143.68 \text{ mm}^3$$



51.21



$$V_{Trick} = l \cdot w \cdot h$$

$$= 281.993$$

Private think time

Listen and compare

(tell what you did, go around)

$$V_{small} = \pi (13.-)^2 \cdot 25.03$$

$$= 15160.115$$

$$544039.07 \text{ mm}^3$$

27.77



1929

2000 SINGLE DRINK GREEN  
NO. 215001140



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Food for thought:

If I need a single ticket roll to hold 1,000,000 tickets around the same inner core, how wide will it be?

Would it fit in the room? In a warehouse?

What are the first questions that come to mind?

<https://youtu.be/aADExWV1bsM?t=56s>



How much would a gold idol weigh? Could a grown person pick it up?



Guess the  
weight of  
actual gold  
idol.



Important facts:

- Density of gold:  $19.32 \text{ g/cm}^3$  (at room temperature at sea level)
- Density of sand: varies, approximately  $2.5 \text{ g/cm}^3$
- Statue dimensions: about 7.5" tall, 4.25" wide, 5" deep
- 1 inch = 2.54 cm    1 lb  $\approx$  0.45kg
- A grown man can lift approximately 30-40 pounds in one hand (about 13.6 - 18.1kg)

To be continued!!!

## HW

complete practice assessment, check solutions at [mgeo.weebly.com](http://mgeo.weebly.com)  
real assessment is Thursday!