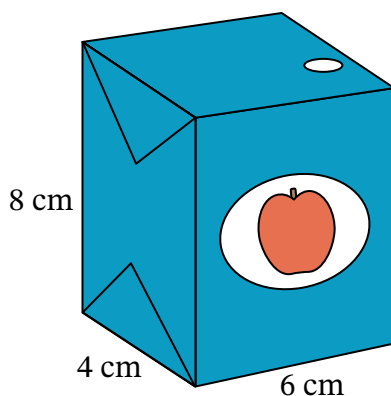Name _____ Date _____

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1. The juice box shown is in the shape of a right rectangular prism. Match each situation to the expression that represents it.

8 cm

4 cm

6 cm

Situation
The total volume of juice the juice box can hold
The volume of juice the juice box holds when it is $\frac{1}{2}$ full
The volume of juice the juice box holds when it is $\frac{1}{4}$ full

| **Expression** |
|---|
| $6 \times 4 \times 4$ |
| $6 \times 4 \times 2$ |
| $6 \times 4 \times 8$ |

The right rectangular prism shown represents a fish tank. Use the prism to complete problems 2–6.

30 cm

20 cm

40 cm
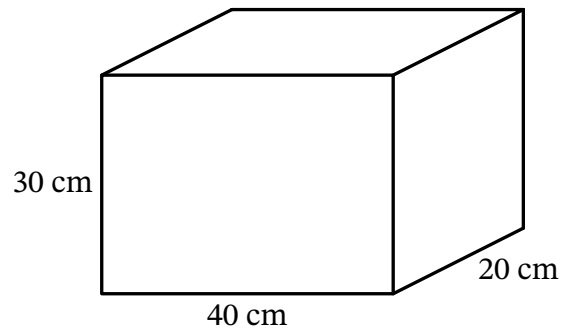
2. What is the volume of the fish tank?

3. How many milliliters of water does the fish tank hold?

4. How many liters of water does the fish tank hold?

5. If the fish tank is only filled to a height of 22 centimeters, how many liters of water are in the fish tank?

6. How many more liters of water are needed to fill the fish tank when it is only filled to a height of 22 centimeters?

7. Adesh has a fish tank that is a right rectangular prism with a volume of 25,000 cubic centimeters. Write one possible length, width, and height for Adesh's fish tank.

8. Find the length, width, and height of at least two different right rectangular prisms that each have a volume of 20,000 cubic centimeters.

9. Tara wants to place a small fish tank on a shelf in her room. The dimensions of the fish tank she wants are shown. Before she gets the fish tank, she wants to be sure it will be large enough for her fish.

35 cm

25 cm

20 cm
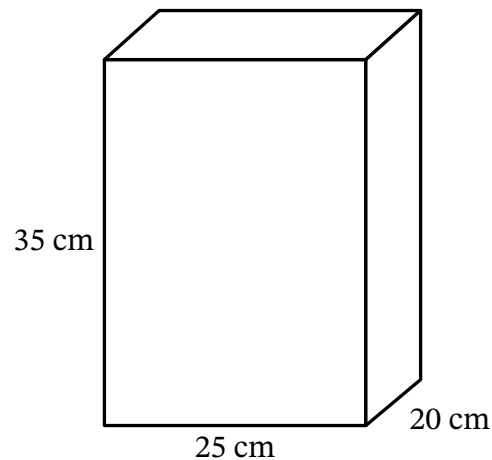
a. To be large enough for Tara's fish, the tank must take up at least 400 square centimeters of flat space. Is this tank large enough for her fish? Show how you know.

b. Tara pours 15 liters of water into the fish tank. How many milliliters of water does she pour into the fish tank?

c. What is the height of the water in centimeters?