

Name _____

Period 1

Date _____

Understanding the Test: View the Test Items**Questions prior to 2006: Grade 8 : Mathematics: Measurement : Question 18**

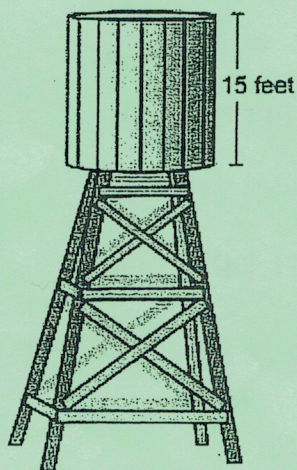
At grade 8, students in Hawai'i are expected to use formulas to find the surface area and volume of prisms, cylinders, and pyramids.

Show all calculations including formula.

Question 18

The drawing shows a water tower on the mainland. The tank on the tower is in the shape of a right circular cylinder.

Diameter = 8 feet

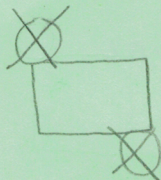


Note:

complete
formula is
posted in room.

The tank, NOT including its top and bottom, will be repainted. To the nearest square foot, what is the surface area that will be repainted? ~~Write your answer in your response booklet and show or explain how you arrived at your solution.~~ Start with your net.

I don't know



$$SA = \pi h$$

$$SA = (3.14 \times h)$$

$$SA = (3.14 \times 15)$$

$$SA = 47.1 \text{ feet}^2$$

$$SA = 2\pi h$$

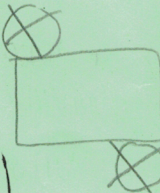
$$SA = (2 \times 3.14 \times h)$$

$$SA = (2 \times 3.14 \times 15)$$

$$SA = 94.2 \text{ feet}^2$$

3/6

3/20



$$SA = 2\pi r h$$

$$SA = (2 \times 3.14 \times r \times h)$$

$$SA = (2 \times 3.14 \times 4 \times 15) / 2$$

$$SA = 376.8 \text{ feet}^2$$