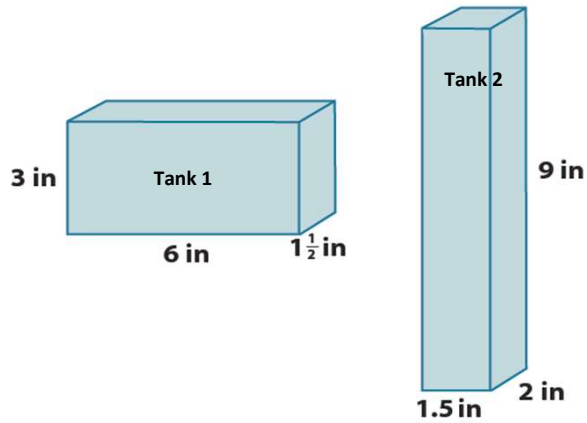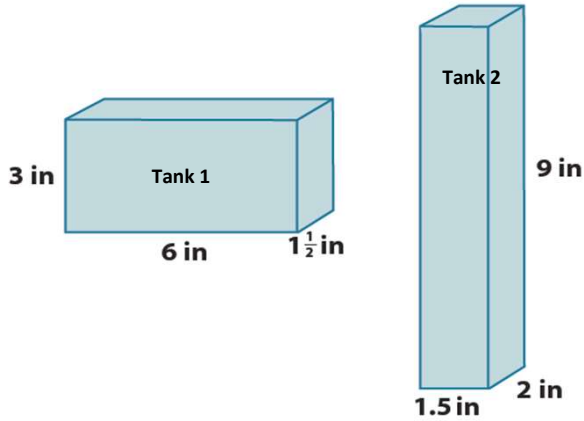# Prism Word Problems Worksheets

The inside space of two different water tanks are shown below. Which tank has a greater capacity? Justify your answer.

Prism Word Problems Worksheets

The inside space of two different water tanks are shown below. Which tank has a greater capacity? Justify your answer.

Tank 2

3 in

Tank 1

9 in

6 in

$1\frac{1}{2}$ in

2 in

1.5 in

$V_1 = Bh = (lw)h$

$V_1 = \left(6 \text{ in.} \cdot 1\frac{1}{2} \text{ in.}\right) \cdot 3 \text{ in.}$

$V_1 = (6 \text{ in}^2 + 3 \text{ in}^2) \cdot 3 \text{ in.}$

$V_1 = 9 \text{ in}^2 \cdot 3 \text{ in.}$

$V_1 = 27 \text{ in}^3$

$V_2 = Bh = (lw)h$

$V_2 = \left(1\frac{1}{2} \text{ in.} \cdot 2 \text{ in.}\right) \cdot 9 \text{ in.}$

$V_2 = (2 \text{ in}^2 + 1 \text{ in}^2) \cdot 9 \text{ in .}$

$V_2 = 3 \text{ in}^2 \cdot 9 \text{ in.}$

$V_2 = 27 \text{ in}^3$

The tanks have the same volume, 27 in^3. Each prism has a face with an area of 18 in^2 (base) and a height that is $1\frac{1}{2}$ in.

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