

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Firing on all Cylinders

Natasha loves to drink Coca Cola. However, she wants to know how much Coke she drinks every day, because she is worried that she drinks too much. Natasha has done some research about the dimensions of one can of Coca Cola:

$h = 5 \text{ in.}$



$r = 1 \text{ in.}$

Natasha decides that she is okay with drinking 30 cubic inches of Coke every day, but doesn't want to drink any more than that. She currently drinks 2 cans of Coca Cola per day, and does some work to see if she needs to change her habits.

I know that the volume of a cylinder is  $V = \pi r^2 h$ . Therefore,

$$V = \pi \cdot 1^2 \cdot 5$$

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$$V = \pi \cdot 5 = 15.71 \text{ in}^3$$

(approximately)

This means 2 cans of coke is  $31.42 \text{ in}^3$ , so I should change my diet.

