

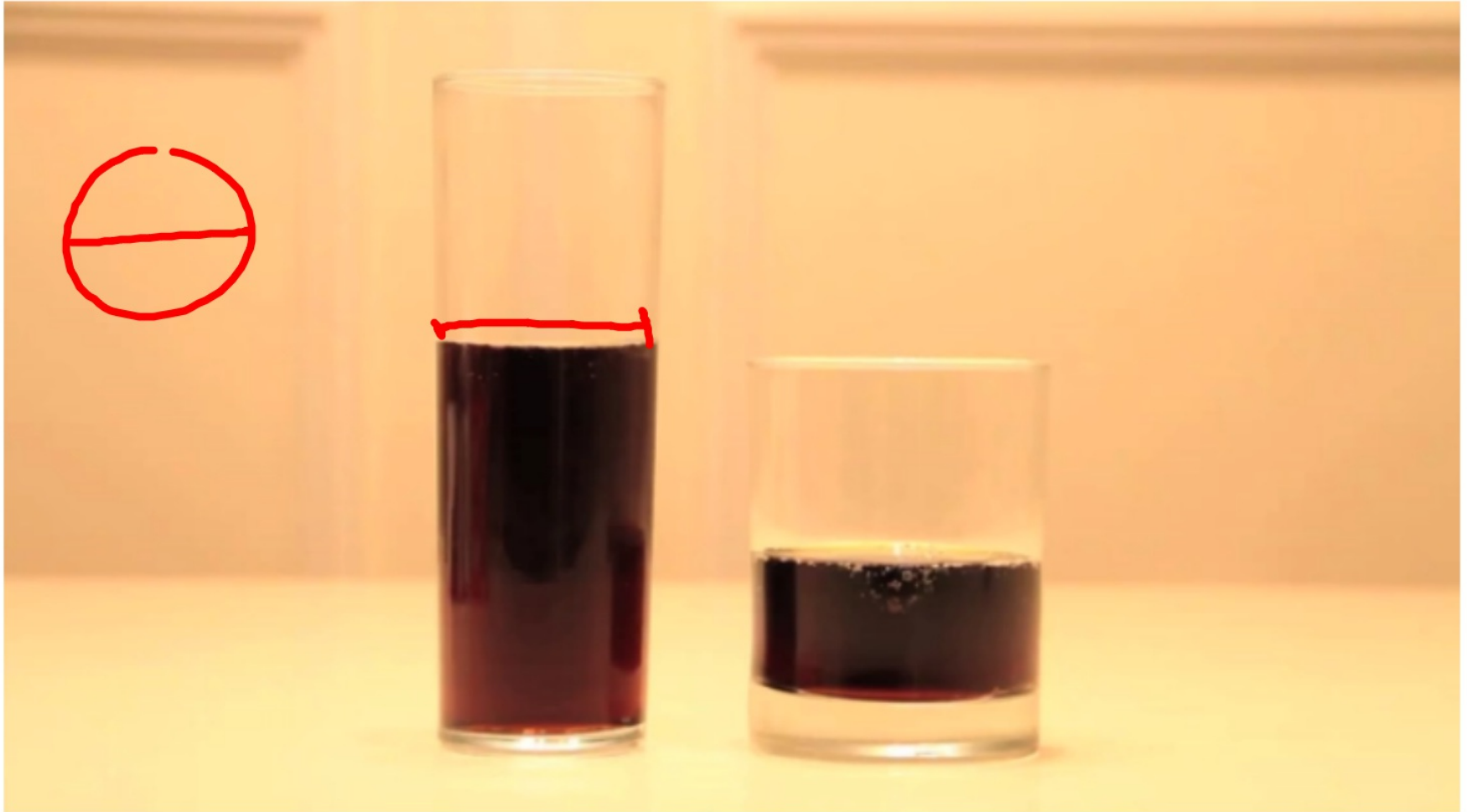
What's the first question that comes to your mind?



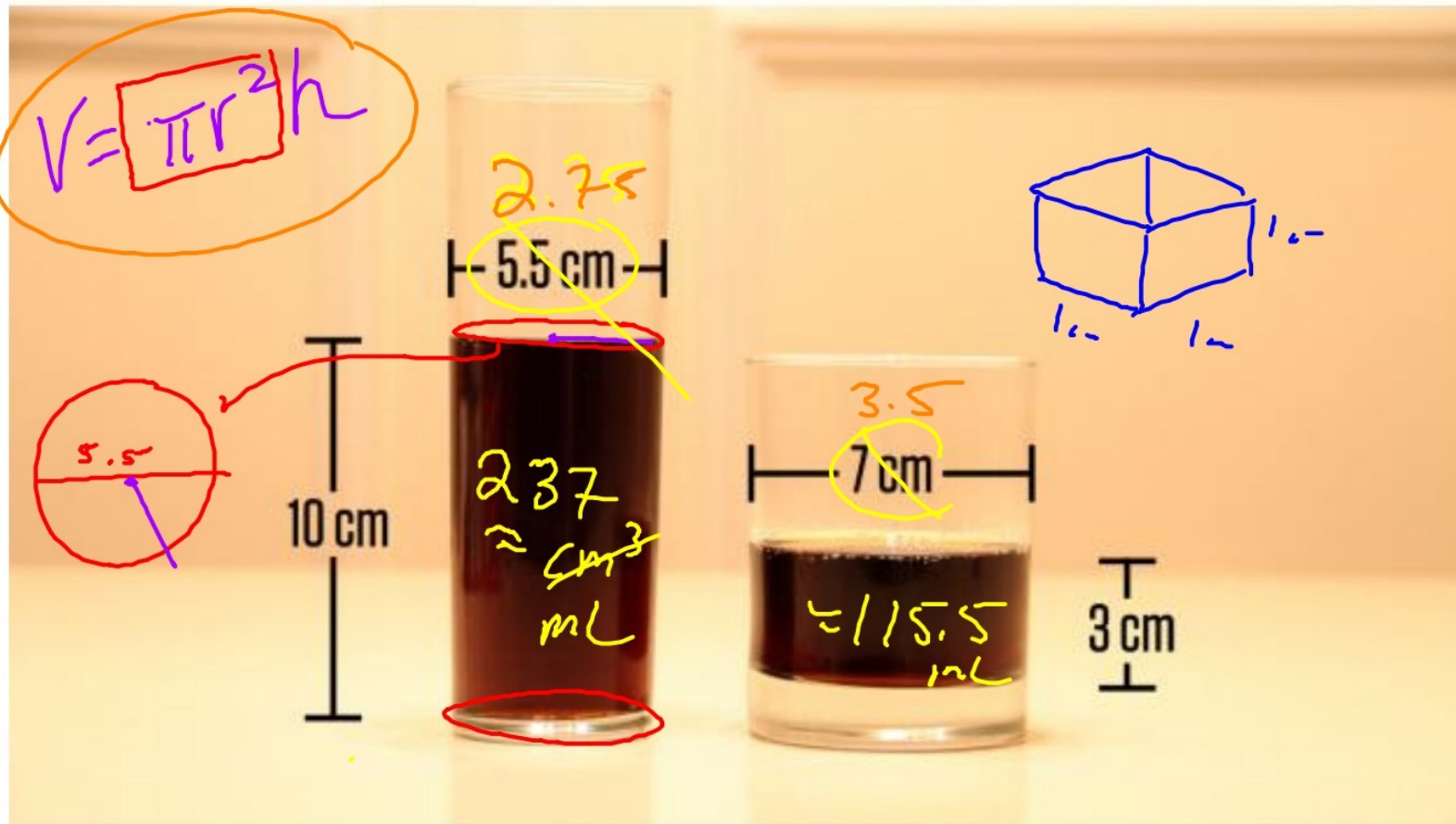
Write down your guess: which one has more soda



What information do you need?



Which one holds more soda?



Explaining Area/Volume Formulas GMD-1a: I can give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone.

Date					
Score					

Coordinate Geometry Review 1 GPE-B1: Given 4 coordinate pairs. I can prove/disprove that a shape is a

Pay close attention and take good notes today!!

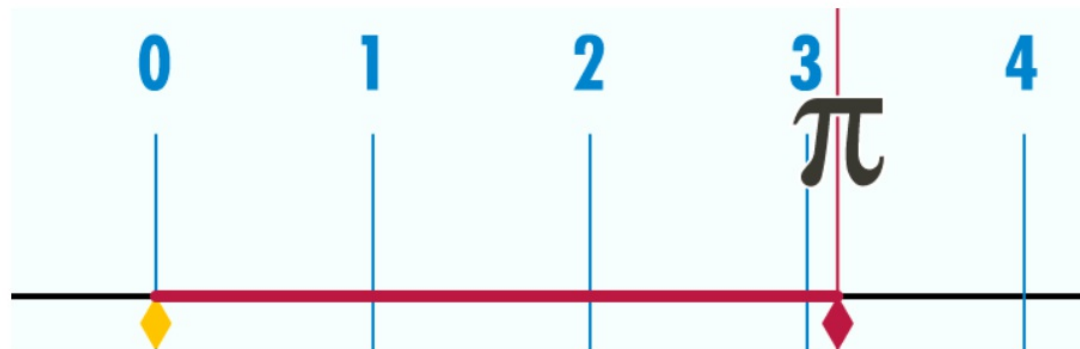
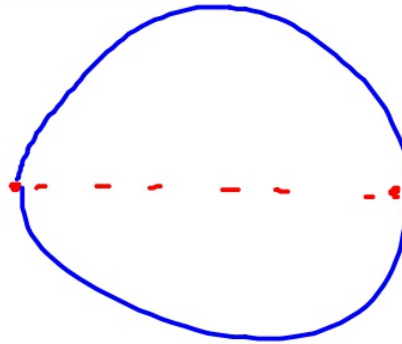
Why is the circumference of a circle $2\pi r$?

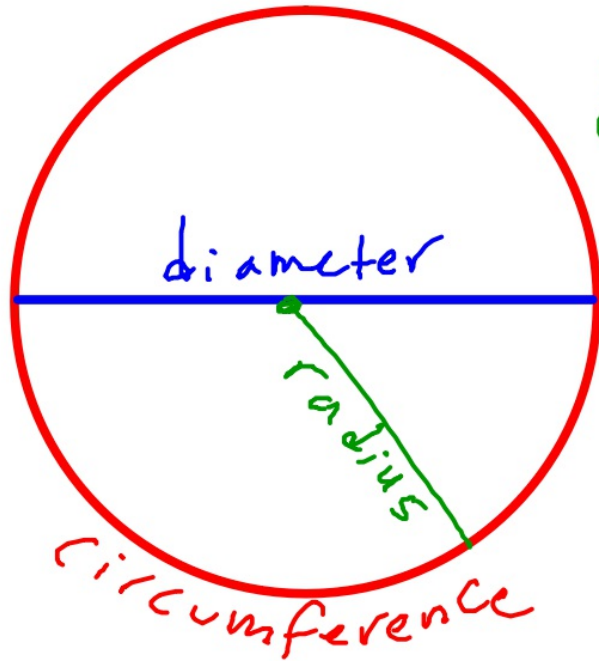
NOTES

Why is the area of a circle πr^2 ?

What is π ?

$$\pi = \frac{\text{Circumf.}}{\text{diameter}}$$





$$2r = D$$

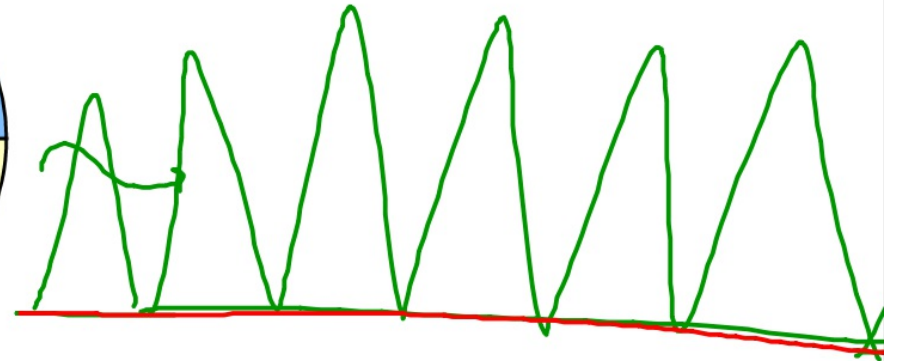
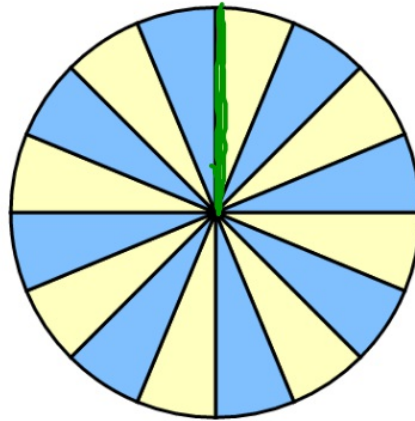
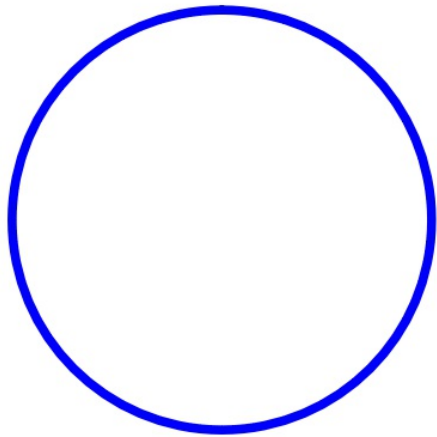
$$\pi = \frac{\text{circumference}}{\text{diameter}}$$

$$2r \left(\pi = \frac{C}{2r} \right) \cdot 2r$$

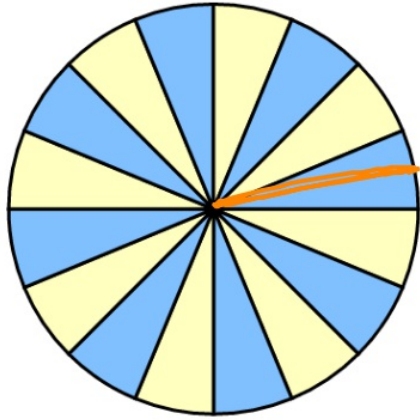
$$2r \pi = C$$

$$\underline{2\pi \cdot r = C}$$

Okay...but area?? πr^2 ??

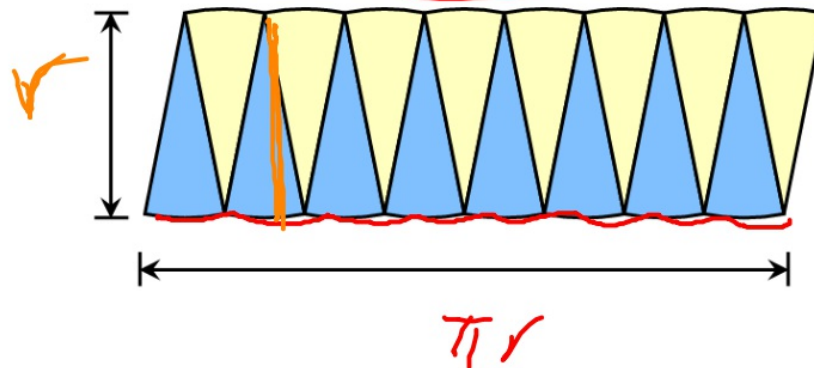


<https://www.youtube.com/watch?v=lZa312pEcTw>



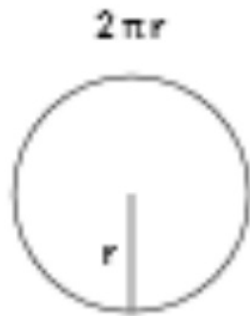
$$A = B \cdot H = \pi r \cdot r \\ = \pi r^2$$

$$\frac{1}{2} \cdot 2\pi r \\ = \pi r$$



Another approach....

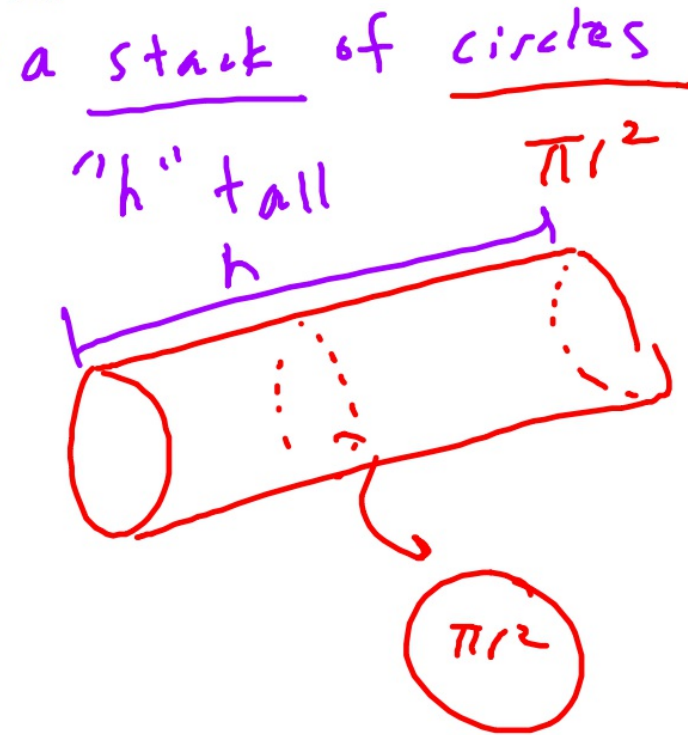
$$\frac{\cancel{\frac{1}{2}} \cdot \cancel{2} \cdot \pi r \cdot r}{\pi r^2}$$





<https://youtu.be/whYqhpc6S6g>

Why is volume of a cylinder $\pi r^2 h$?



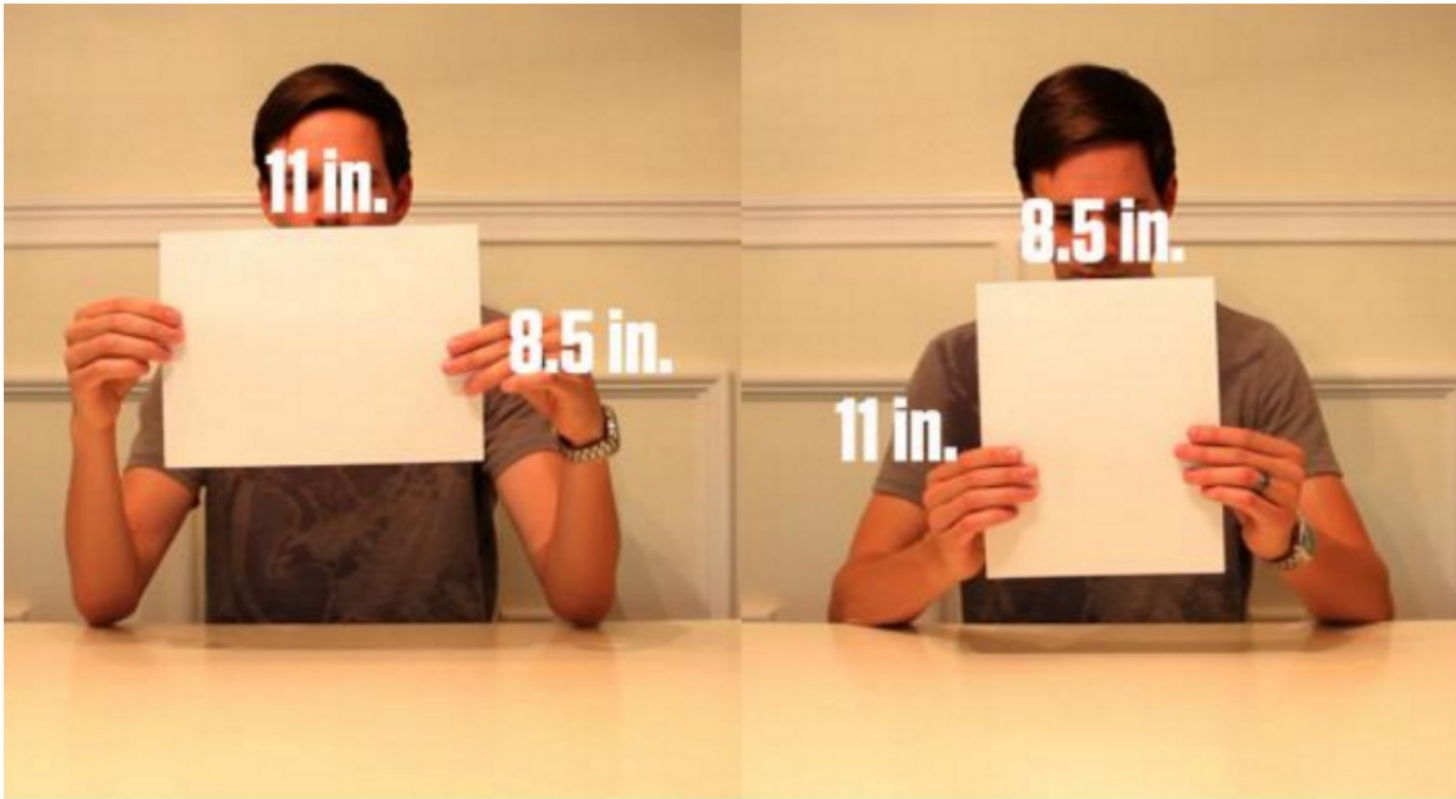
Which one holds more popcorn? Write down your guess



Wide

Tall

Which tube holds more popcorn? $V = \pi r^2 \cdot h$



wide

tall

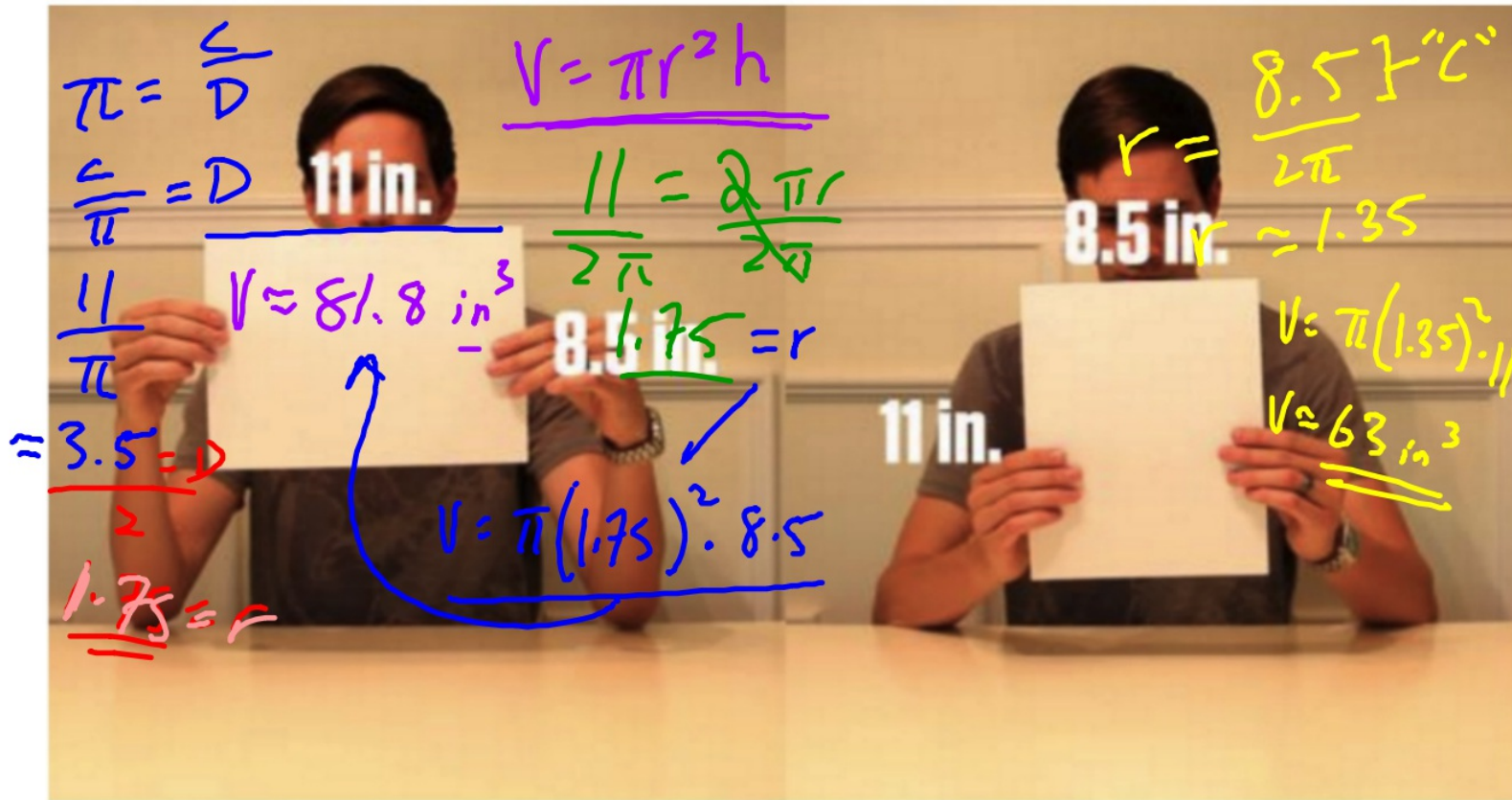
Which tube holds more popcorn? Write down your guess



Wide

Tall

Which tube holds more popcorn? Support your answer with numbers!!



wide

tall