[12.3] Volumes of Prisms and Cylinders

↳ Amount of space a Solid takes up.

Thm 12.5
## Volume of a Prism → "accordian"

$$V = Bh$$

height

area of base

h ↑ B → S.S

h ↑ B → $\frac{1}{2}bh$

h ↑ B → $\frac{1}{2}aP$
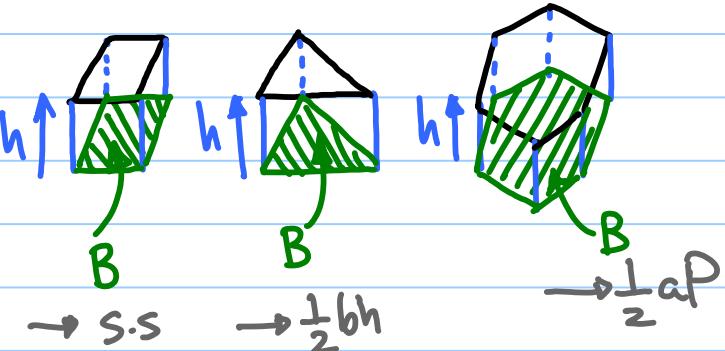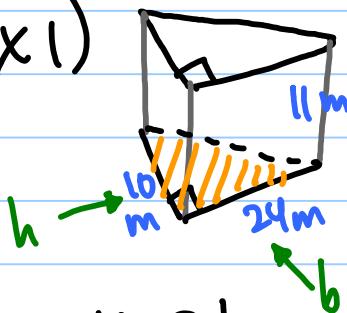
ex1) Find the volume of the triangular prism.

11 m
10 m
24 m
h
b

$$V = Bh$$
$$(\frac{1}{2}bh)h$$
$$\frac{1}{2}(24)(10)11 = 1320 \, m^3$$ ← Volume

55
24
220
110

Your Turn
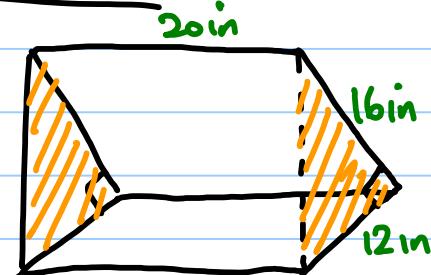
20 in
16 in
12 in

$$V = Bh$$
$$(\frac{1}{2}bh)h$$
$$\frac{1}{2}(12)(16)20 = 1920 \, in^3$$

B

### Thm 12.6
Volume of a Cylinder

r
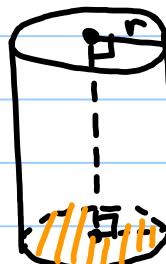
$$V = \pi r^2 \cdot h$$

ex last example of the day, I promise)
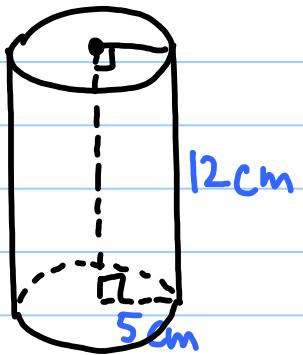
Find the
volume of the
Cylinder:

12cm

5cm

$$V = \pi r^2 h$$
$$= \pi (5)^2 12 \approx 942.5 \ cm^3$$