Notes #21: **Surface Area and Volume of Cylinders (Section 12.3)**

Let's Draw:
- **Draw a squished circle (ellipse)**
- **Draw a congruent ellipse above it**
- **connect the right and left sides with straight lines**

Key Parts

Base:

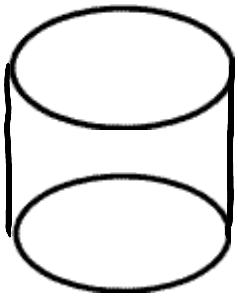
_____

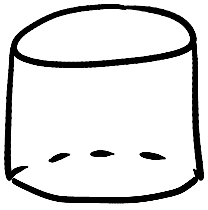
Altitude:

_____

radius:

_____





Lateral Area of a Cylinder

_____

$LA = 2\pi rh$

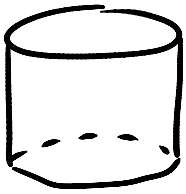
$LA =$(_____)(_____)

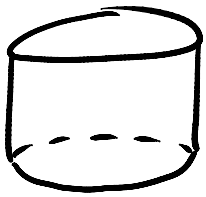
Total Area of a Cylinder

_____

$TA = LA + 2\pi r^2$

$TA =$ (_____) + 2(_____)





Volume of a Cylinder

_____

$V = \pi r^2 h$

$V =$ (_____)(_____)

Sketch each cylinder. Then find its lateral area, total area, and volume:

1. r = 6, h = 5

2. diameter = 10, h = 3

3. r = 2, h = 7

4. The volume of a cylinder is 27π. If r = h, find r.

5. The lateral area of a cylinder is 20π. If h = 5, find r.