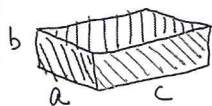

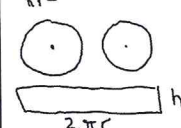



Digits Lesson 13-1/13-2

Surface Area/Volume of a Cylinder & Rectangular Prism

| | |
|--|---|
| <p>Goal: I will be able to determine the surface area and volume of a cylinder.</p> | |
| <p>Tool Bag Formulas, equations, Vocabulary, etc.</p> | <p>Here's How... Notes & Examples</p> |
| <p>Surface Area</p> | <p>"The skin" The amount to wrap the shape.</p> |
| <p>Volume</p> | <p>How much the shape holds.</p> |

| | |
|--------------|---|
| Review | <p>Rectangular Prism</p>  |
| Surface Area | <p>= sum of the areas of all sides. = $2a \cdot b + 2bc + 2a \cdot c$</p> |
| Volume | <p>= area base \cdot height = $a \cdot b \cdot c$</p> |

| | |
|--------------|--|
| Cylinder |  <p>$r = \text{radius}$ $h = \text{height}$</p> |
| Surface Area | <p>= top + bottom + side</p>  <p>= $2\pi r^2 + 2\pi rh$</p> |

| | |
|-------------------------------------|--|
| Volume | <p>= Area bottom \cdot height = $\pi r^2 h$</p> |
| U Δ |  <p>$r=3$ Surface Area=? $h=8$ Volume=?</p> |
| <p>$\frac{3.14}{66}$</p> | <p>$S.A. = 2\pi r^2 + 2\pi rh$ $= 2\pi 3^2 + 2\pi 3 \cdot 8$ $= 18\pi + 48\pi$ $= 66\pi$</p> <p>$Vol. = \pi r^2 \cdot h$ $= \pi 3^2 \cdot 8$ $= 72\pi$</p> |