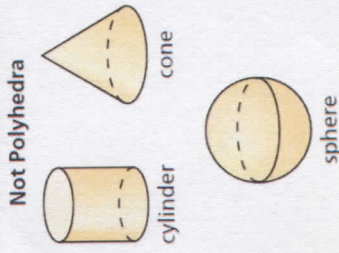
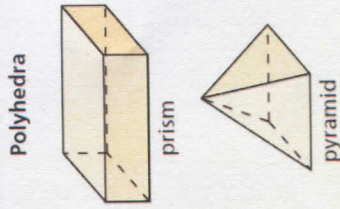
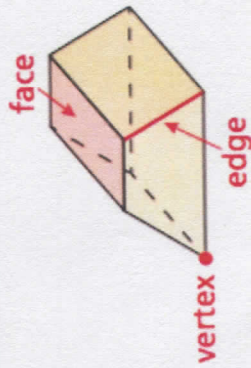


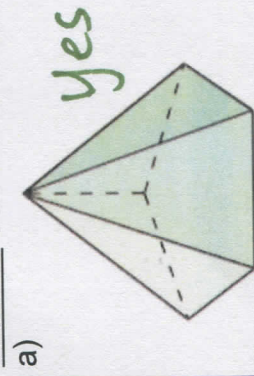
OBJECTIVE 1: Terminology & Types of Solids



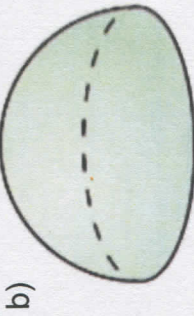
OBJECTIVE 2: Prism VS Pyramid

- Prisms have to congruent, parallel bases.
- Pyramids have one base.
- To name a prism or pyramid, use the shape of the base.

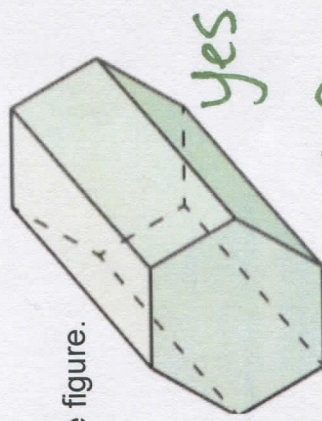
TASK 1: Tell whether each solid is a polyhedron (from OBJECTIVE 1) and then name the figure.



Pentagonal Pyramid



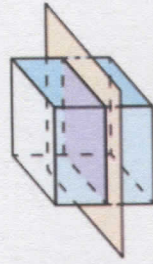
Hemisphere



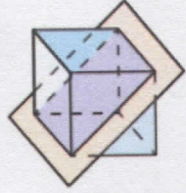
Hexagonal Prism

OBJECTIVE 3: Describing Cross Sections

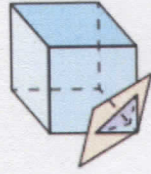
Imagine the game fruit ninja, the sword slices a fruit like a plane slices through a solid creating a cross section.



square

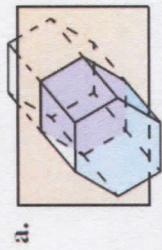


rectangle

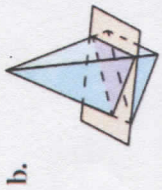


triangle

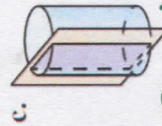
TASK 2: Describe the shape formed by the intersection of the plane and the solid.



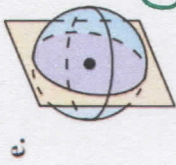
a) **Hexagon**



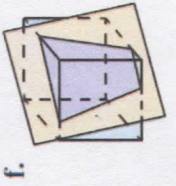
b) **Triangle**



c) **Rectangle**



d) **Circle**



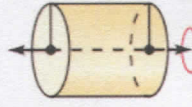
e) **Trapezoid**



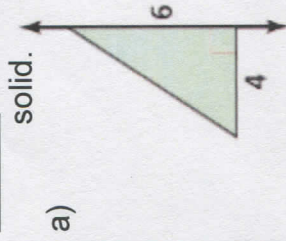
OBJECTIVE 4: Sketching & Describing Solids of Revolution

A solid of revolution is a three-dimensional figure that is formed by rotating a two-dimensional shape around an axis. The line around which the shape is rotated is called the axis of revolution.

ie: Rectangle around a vertical line, you get a cylinder.

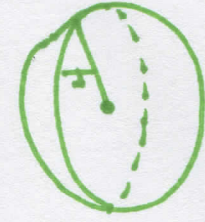
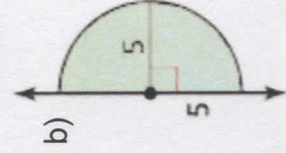


Cylinder



cone

radius: 4u
height: 6u

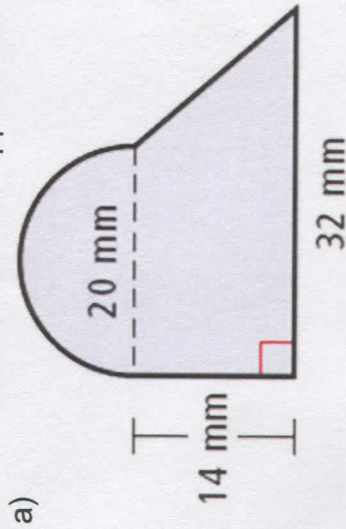


sphere
radius: 5u

TASK 3: Sketch the solid produced by rotating the figure around the given axis. Then identify the figure and describe the

OBJECTIVE 5: Composite Shapes

TASK 4: Find the shaded area by breaking the composite shape into smaller shapes and add or subtract as needed. Give the exact & approximate answers.



$$\frac{1}{2}\pi r^2 + \frac{1}{2}h(b_1 + b_2)$$

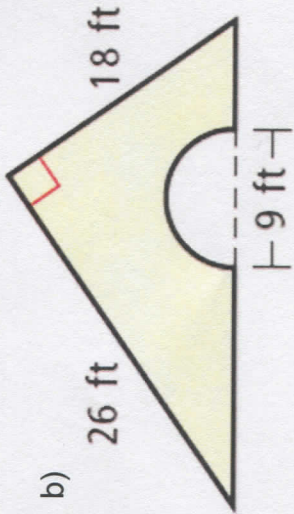
$$\frac{1}{2}(\pi(10)^2) + \frac{1}{2}(14)(20 + 32)$$

$$= 50\pi + 364 \text{ mm}^2 \approx 521.080 \text{ mm}^2$$

Still need help with:

- 1) Set up a plan
- 2) Create the "formula" for the plan
- 3) Plug in #'s
- 4) Simplify (exact)
- 5) Use calculator (approximate)

Composite Shapes



$$\frac{1}{2}bh - \frac{1}{2}(\pi r^2)$$

$$\frac{1}{2}(18)(26) - \frac{1}{2}(\pi(4.5)^2)$$

$$= 234 - 10.125\pi \text{ ft}^2$$

$$\approx 202.191 \text{ ft}^2$$