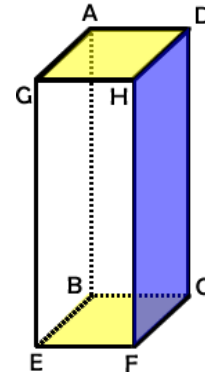


Geometry (G.GMD.3)
Unit Three: Prisms (HW7)

Name: _____
 Date: _____ Period: _____

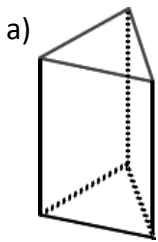
1. Match the following terms to the diagram.

Given the rectangular prism **with face BCFE as one of its bases**. Give an example of each of the requested parts of the prism below that is different from the one in your notes.

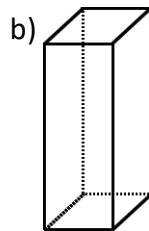


1. Edge \overline{GE} (answers will vary)
2. Lateral Face GHFE (answers will vary)
3. Base ADHG (answers will vary)
4. Vertex G (answers will vary)
5. Height \overline{HF} (answers will vary)

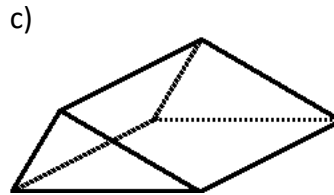
2. Properly name the following prisms.



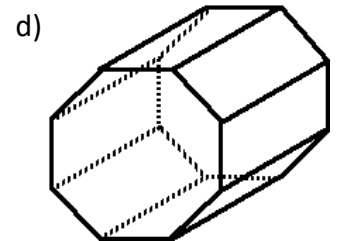
Name: Right Triangular prism



Name: Right Rectangular prism

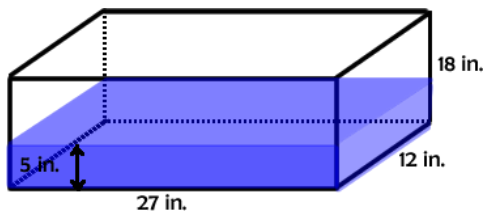


Name: Right Triangular prism

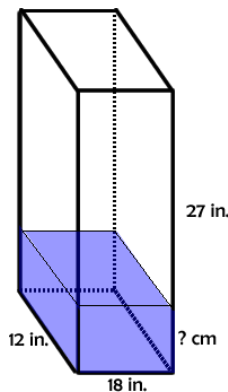


Name: Right Octagonal prism

3. An enclosed glass box contains 1620 in^3 of water. When the glass box is tilted on its side the water shifts places. What is the relationship of the water before and after the tilting? What is the height of the water when the box is tiled upright?

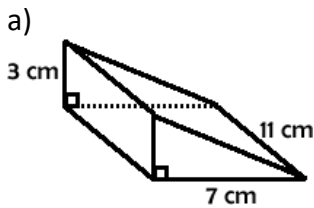


$\text{Volume} = Bh = 27(12)(5) = 1620$



$1620 = Bh$
 $1620 = (216)(h)$
 $h = 7.5''$
 $B = (12)(18) = 216$

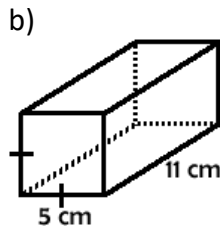
4. Determine the volume of the prisms. (Lines that appear perpendicular are perpendicular.)



$$B = \frac{1}{2} (7)(3) = 10.5$$

$$V = Bh$$

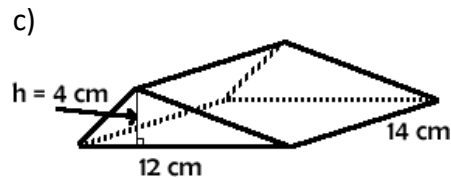
$$V = 10.5(11)$$



$$B = (5)(5) = 25$$

$$V = Bh$$

$$V = 25(11)$$



$$B = \frac{1}{2} (12)(4) = 24$$

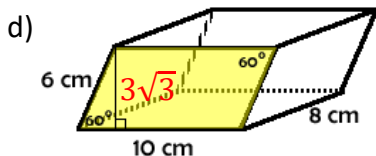
$$V = Bh$$

$$V = 24(14)$$

Volume = 115.5 cm³ (1 dec.)

Volume = 275 cm³

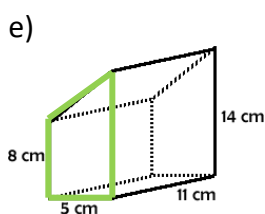
Volume = 336 cm³



$$B = bh = (10)(3\sqrt{3}) = 30\sqrt{3}$$

$$V = Bh$$

$$V = 30\sqrt{3} (8)$$

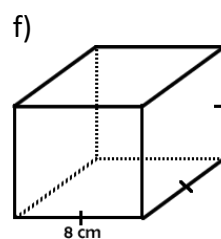


$$B = \frac{1}{2} (h)(b_1 + b_2)$$

$$B = \frac{1}{2} (5)(8 + 14) = 55$$

$$V = Bh$$

$$V = 55(11)$$



$$B = (8)(8) = 64$$

$$V = Bh$$

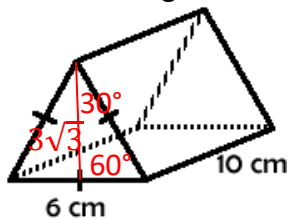
$$V = 64(8)$$

Volume = 240√3 cm³ (E)

Volume = 605 cm³

Volume = 512 cm³

g) Equilateral Triangular Prism



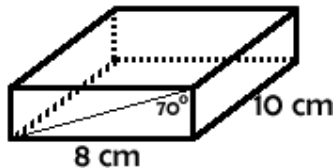
$$B = \frac{1}{2} bh$$

$$B = \frac{1}{2} (6)(3\sqrt{3}) = 9\sqrt{3}$$

$$V = Bh$$

$$V = 9\sqrt{3} (10)$$

h)



$$\tan 70 = \frac{8}{h}$$

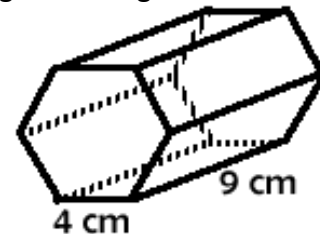
$$h = \frac{8}{\tan 70} \approx 2.91$$

$$B = (8)(10) = 80$$

$$V = Bh$$

$$V = 80(2.91)$$


i) Regular Hexagonal Prism



$$B = \frac{1}{2} ap$$

$$B = \frac{1}{2} (2\sqrt{3})(24) = 24\sqrt{3}$$

$$V = Bh$$

$$V = 24\sqrt{3} (9)$$


Volume = 90√3 cm³ (E)

Volume = 232.80 cm³ (2 dec.)

Volume = 216√3 cm³ (E)