You need out your Warm Up & Agenda

Homework: Volume Practice. Test next week!!

Warm Up:

1) Find the area of the shaded region:

$$64$$ 8

$$8$$

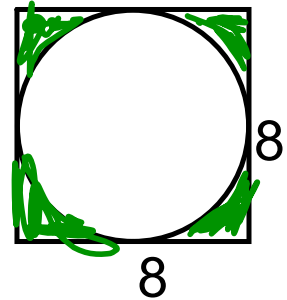50.24 $d = 8$ $r = 4$ $\pi \cdot r \cdot r$

$3.14 \times 4 \cdot 4$

2) Solve: $\frac{1}{4}x - 10 < -30$

$+10 \quad +10$

$\frac{1}{4}x < -20 \cdot \frac{4}{1}$
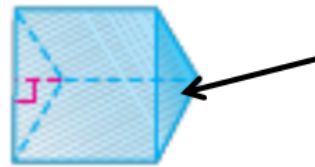
$x < -80$

64.00

50.24

$\boxed{13.76}$
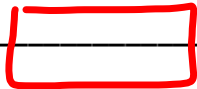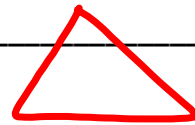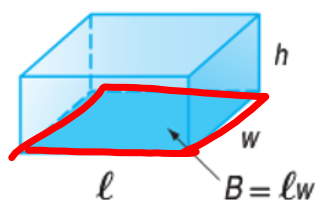
8

8
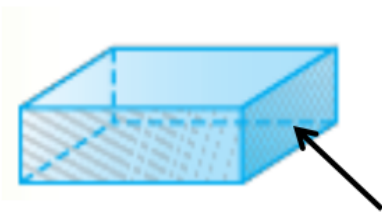
What is the base of a **rectangular prism**? _____

What is the base of a **triangular prism**? _____

The volume V of a rectangular prism is the product of the length ℓ, the width w, and the height h. It is also the area of the base B times the height h.

$V = \ell wh$ or $V = Bh$

Model

h

ℓ

w

$B = \ell w$

So the formula is:
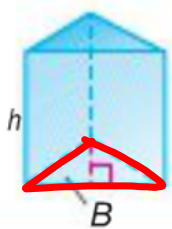
$V = B \cdot h$

$V = l \cdot w \cdot h$

The volume V of a triangular prism is the area of the base B times the height h.
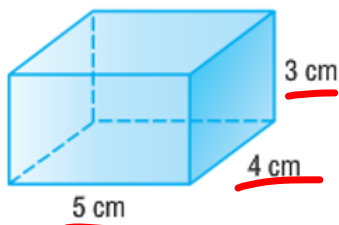
$V = Bh$, where B is the area of the base.

Model

So the formula is:

$V = B \cdot h$

$$\left(\frac{l \cdot w}{2} \right) \cdot h$$
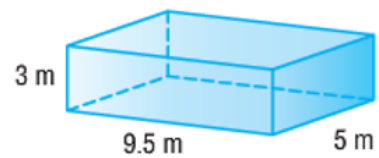
$$V = \frac{l \cdot w \cdot h}{2}$$

Example 1: Find the volume of the
rectangular prism.

3 cm

4 cm

5 cm

$5 \cdot 4 \cdot 3$

60 cm^3

Example 2: Find the volume of the
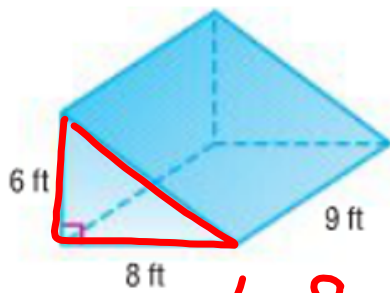rectangular prism.

3 m

9.5 m   5 m

$9.5 \cdot 5 \cdot 3$

142.5 m^3
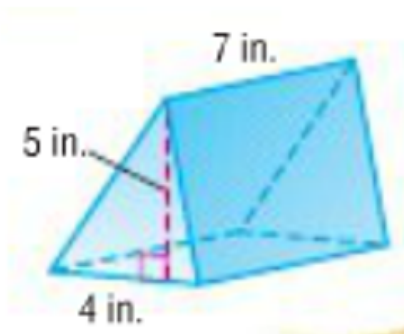
Example 3: Find the volume of the rectangular prism.

Example 4: Find the volume of the triangular prism.

6 ft

9 ft

8 ft

$$\frac{6 \cdot 8}{2} \cdot 9 = 216 \, ft^3$$
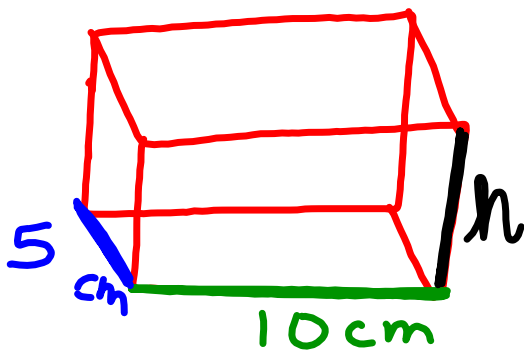
Example 5: Find the volume of the triangular prism.

7 in.

5 in.

4 in.

$$\frac{4 \cdot 5 \cdot 7}{2} = 70 \, in^3$$

Example 6: Find the volume of the triangular prism.

$V = 450 \text{cm}^3$

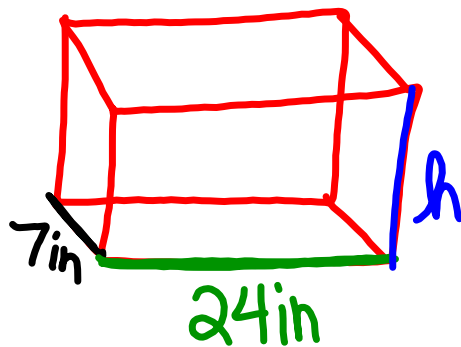5cm

10cm

h

$V = 12{,}000$

40cm

20cm

h

7in

24in

h
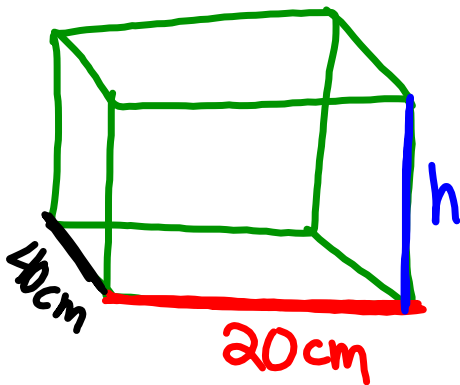
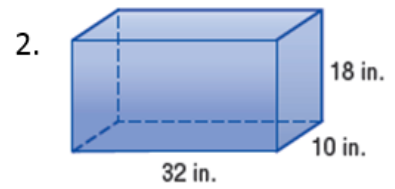$V = 3,024$

$V = l \cdot w \cdot h$
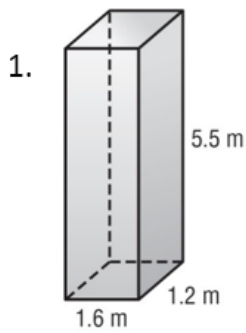
$3,024 = 24 \cdot 7 \cdot h$

$3,024 = 168h$

$$\frac{168h}{168} = \frac{3,024}{168}$$
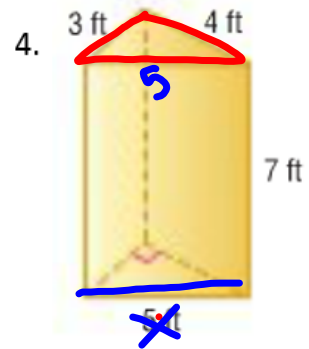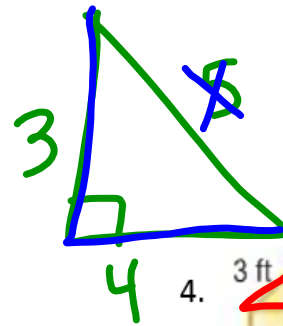
$\boxed{h = 18}$

Tonight's Homework:

Volume of Prisms- Homework

1.

5.5 m

1.2 m
1.6 m

2.

18 in.

10 in.

32 in.

3

$\cancel{5}$

4

No slant

2.

$\cancel{1}$ in.

5 in.

4 in.

12 in.

4.   3 ft   4 ft

5

7 ft

$\cancel{x}$
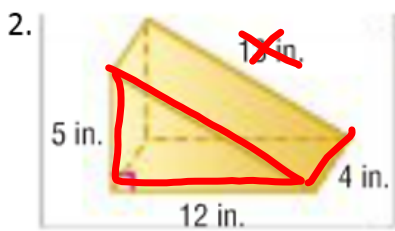
You need out your MSG & Agenda

Homework: Volume Practice

Opening:

1) Find the volume:

12 ft

1.7 ft

6.4 ft

2) Find the volume:

8 in.

15 in.

17 in.

7 in.

3) Solve for x: 2x + 12 = -24