#3 WORK OF THE WEEK   (Gr 8)

I) Show your work on each mental math strategy

   Sample strategies

5% of 240   One way to find 5% of a number is to first think of 10% of the same number (move the decimal once leftward or make the number ten times smaller) Ex: 10% of 240 is 24, so 5% of 240 is half of this or 12.

$6 \times 3\frac{1}{2}$ If we recognize that $3\frac{1}{2}$ is really $3 + \frac{1}{2}$, then we can separate it. $6 \times 3 = 18$ and $6 \times \frac{1}{2} = 3$, so $18 + 3 = 21$.

7 x 25 x 7 X 4   Here, we should look for compatible sets of numbers. If the question is only multiplication, the order does <u>not</u> matter. Notice that 25 x 4 = 100 and 7 x 7 = 49, so 100 x 49 = 4900.

Recap on example #1	Recap on example #2	Recap on example #3
5% of 240	$6 \times 3\frac{1}{2}$	7 x 25 x 7 x 4
10% of 240 = 24	$(6 \times 3) + (6 \times \frac{1}{2})$	rearrange 25 x 4 x 7 x 7
so, 5% is half of 24	18 + 3	(25 x 4) x (7 x 7)
= 12	= 21	100 x 49 = 4900

a)

5% of 180
=

b)

$8 \times 8\frac{1}{2}$
=

c)

25 x 17 x 4 x 3
=

d)

5% of 880
=

e)

$100 \times 5\frac{1}{2}$
=

f)
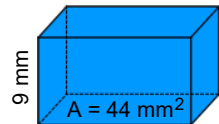
9 x 50 x 3 x 2
=

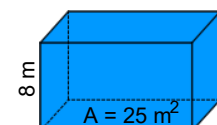II) Given the area of each base, find the volume, remember volume units are cubed.

Ex

$$V = A_b H$$

This states that the volume is equal to the area of the base (A_b) multiplied by the height (H) of the prism.
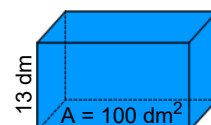
9 mm   A = 44 mm^2

$$= (44 \text{ mm}^2)(9\text{mm})$$

$$V = 396 \text{ mm}^3$$ Notice the units are cubed.

a)

8 m   A = 25 m^2

$$V = A_b H$$
$$=$$
$$=$$

b)

13 dm   A = 100 dm^2

$$V = A_b H$$
$$=$$
$$=$$

c)

11 hm   A = 40 hm^2

$$V = A_b H$$
$$=$$
$$=$$

d)

10 ft   A = 15 ft^2
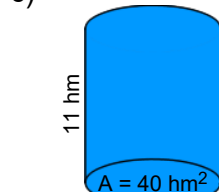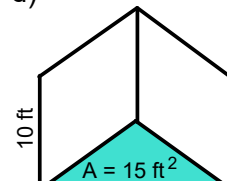
$$V = A_b H$$
$$=$$
$$=$$

** Subsequent / future volume questions may not have the area of the base given **

III) Show your work in solving the following word problems

Ex
  What is the better buy for apples ?   Option A   **OR**   Option B
                                               5 kg for $2.85   7 kg for $3.85

> Do find the answer, we have to calculate the cost of 1 apple for each option:
>
> If 5 kg costs $2.85, then we can divide 2.85 by 5, getting 0.57, so in Option A each apple is $0.57
>
> If 7 kg costs $3.85, then we can divide 3.85 by 7, getting 0.55, so in Option B each apple is $0.55
>
> So, the better buy for apples is Option B

a)
  What is the better buy for bananas ?   Option A   **OR**   Option B
                                               4 kg for $3.44   11 kg for $8.91

b)
  What is the better buy for chips ?   Option A   **OR**   Option B
                                               3 bags for $8.43   5 bags for $13.55

IV) Plot the following points on the Cartesian plane, the first three are done for you
     (remember to plot horizontally first, then vertically)

  A(2,5) , B(-1,3) , C(7,-6) , D(-9,2) , E(10,10) , F(-1,10) , G(7,0) , H(0,-2), I(-8,-5)