

# Ysgol Uwchradd Caergybi Mathematics Department Homework Pack

## Year 8      Module 8 Intermediate

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Name .....

Class ..... Teacher .....

Name .....

# Algebra

$$\frac{\dots}{20} \times 100 = \dots\%$$

1. What do you remember from the beginning of the year
  - a. Simplify  $4d + 6f - 3d + 10d$  ..... [2]
  - b. If  $t = 5$  and  $r = 2$  find the value of  $3t + 4r$  ..... [2]
  - c. Solve
    - i.  $x + 7 = 19$  ..... [1]
    - ii.  $3x + 7 = 25$  ..... [2]

2. The formula to change from degrees Fahrenheit to degrees Celsius ..... [2]  
 $F = C \times 9/5 + 32$  convert  $37^{\circ}\text{C}$  to Fahrenheit.

.....

3. The formula for the cost of buying a bicycle on credit is

**cost = monthly payment  $\times$  9 + deposit**



Find the **cost** of a bicycle, when the **monthly payment** is £15 and the **deposit** is £30. [2]

.....  
.....

4. The cost of renting a holiday cottage is given by the formula

**Cost = Number of days  $\times$  £60 + Fixed charge.**

Four friends decide to rent the cottage for **5 days** when the **fixed charge is £120.**

How much will **each** friend pay if the cost is shared equally? [4]

.....  
.....

5. a) Write down the next term in the sequence. 72, 64, 56, 48, ..... [1]

b) Describe, **in words**, the rule for continuing the following sequences.

10, 21, 32, 43, ..... Rule: ..... [1]

128, 64, 32, 16, ..... Rule: ..... [1]

- c) Write down the  $n$ th term of the sequence 3, 7, 11, 15, 19, ..... [2]

.....

To improve I need to .....

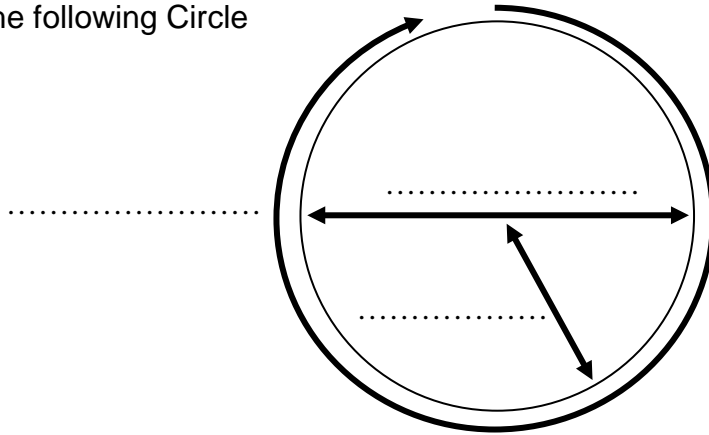
Name .....

# Circles

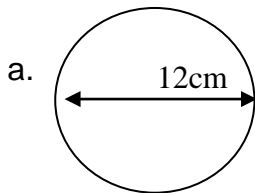
$$\frac{\dots}{20} \times 100 = \dots\%$$

1. Label the following Circle

[3]



2. Calculate the **Circumference** and **Area** of the following circles (use  $\pi$  or 3.14)  
**Use the correct units**

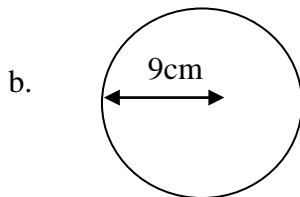


Circumference .....

[2]

Area .....

[2]

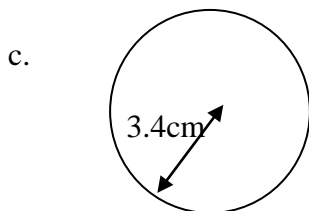


Circumference .....

[2]

Area .....

[2]

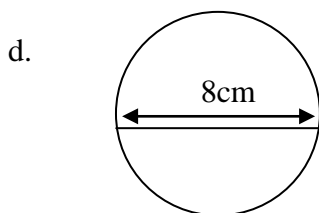


Circumference .....

[2]

Area .....

[2]



Circumference .....

[2]

Area .....

[2]

.....

1 mark for correct units used in all answers

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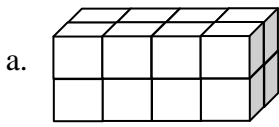
Name .....

# Volume

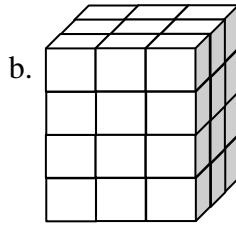
$$\frac{\dots}{20} \times 100 = \dots\%$$

6. By counting cubes calculate the volume of the following shapes

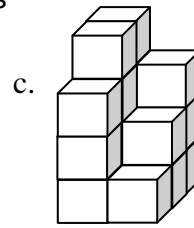
[3]



.....



.....

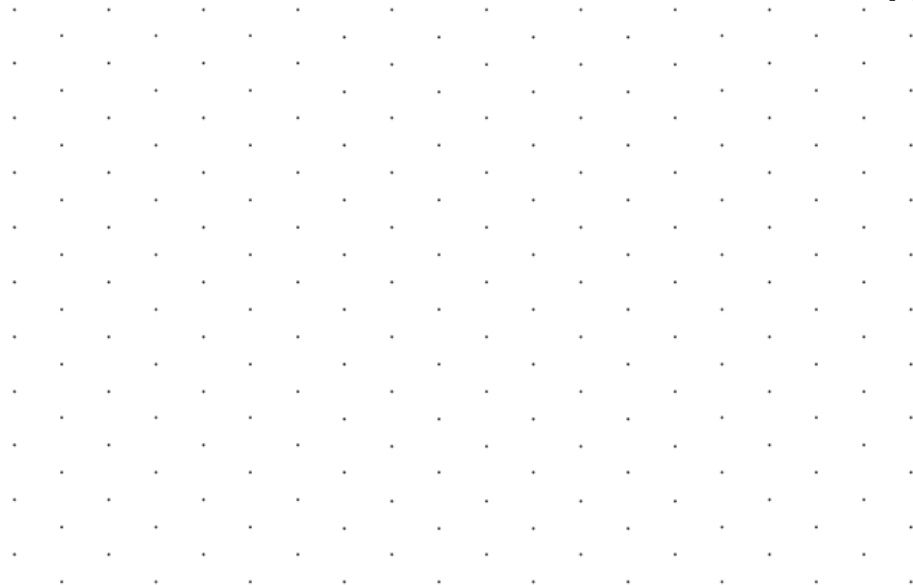


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7. Draw the following cuboids on the isometric paper

a. **3 x 3 x 3**

[3]



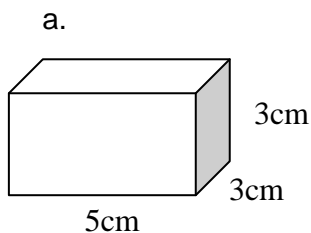
8. Complete the following sentences

Volume = ..... x ..... x ..... The units are ..... [4]

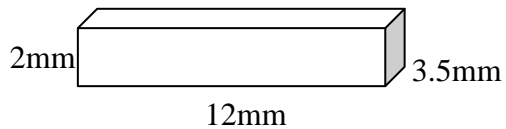
9. By using the correct formula calculate the volume of the following cuboids.

Use the correct units

b. [6]



.....



.....

10. A cube has edges 6cm long. Find the volume ..... [2]

11. A Cube has a volume of 1000cm<sup>3</sup>, what is the length of one side ? ..... [2]

To improve I need to .....

Name .....

# Functional

$$\frac{\dots}{10} \times 100 = \dots\%$$

1. A shop selling sandwiches has the following signs in the window.

<u>OPEN</u>	
Monday	10.00 am – 3.30 pm
Tuesday	10.00 am – 3.30 pm
Wednesday	10.00 am – 6.00 pm
Thursday	10.00 am – 3.30 pm
Friday	10.00 am – 6.00 pm
Saturday	9.00 am – 3.00 pm
Sunday	Closed

<u>PRICES</u>			
	<u>Small</u>	<u>Medium</u>	<u>Large</u>
Cheese	£1.35	£1.55	£1.75
Tuna	£1.50	£1.75	£2.00
Ham	£1.65	£1.95	£2.25

For how long is the shop open on a Tuesday?

On which days is the shop open later than usual?

[2]

You have been asked to go to the shop to buy 2 medium sandwiches and 2 large sandwiches.  
You only have £7.50 to spend.  
Give **one** example of what you could buy, and calculate how much money you would have left.

[4]

For one week the owner of the shop collects information about the different types of sandwich fillings that were sold each day.

The table below shows some of the results.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	TOTALS
Cheese	32	23	26	22	29	20	
Tuna	9	15	21	10	20	12	87
Ham	22	20	25		35	13	135
TOTAL	63		72	52	84	45	374

What type of filling was the most popular and on which day was most sandwiches sold?

[4]

To improve I need to .....