

**Ysgol Uwchradd Caergybi  
Mathematics Department  
Homework Pack**

**Year 7      Module 2  
Higher**

<b>Topic</b>	<b>Page</b>	<b>Date</b>	<b>Mark %</b>	<b>Comments / To Improve</b>
Number 1	1 – 2	.....	.....	..... .....
Number 2	3	.....	.....	..... .....
Decimal - Money	4 – 5	.....	.....	..... .....
Time	6 – 7	.....	.....	..... .....
Area	8	.....	.....	..... .....
Angles	9 – 10	.....	.....	..... .....
Functional	11 – 12	.....	.....	..... .....

Name .....

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

Name .....

Number

$$\frac{\dots}{30} \times 100 = \dots\%$$

1. Look at the following list of numbers

2    3    4    9    13    16    24    27    42    49

**Using the above numbers only**

- a. Multiples of 3 ..... [2]
- b. Factors of 24 ..... [2]
- c. Prime numbers ..... [2]
- d. Square numbers ..... [2]

2. List the first 10 multiples of

- a. 9 ..... [2]
- b. 14 ..... [2]

3. List the Lowest common multiple of

- a. 3 and 4 ..... [2]
- b. 12 and 20 ..... [2]

4. List all the factors of

- a. 24 ..... [2]
- b. 36 ..... [2]
- c. 37 ..... [2]

5. What is the highest common factor of 24 and 36 ? ..... [2]

6. Write the following as a product of its prime factors, in index form

a. 28

[3]

b. 60

[3]

*To improve I need to .....*

Name .....

**Number-2**

$\frac{\dots}{40} \times 100 = \dots\%$

1. Use the BODMAS rules to answer the following

*Remember*  $()^2 \div \times + -$

a.  $5 + 4 \times 3 =$   $13 - 20 \div 5 =$  [4]

.....  
.....

b.  $(5 + 4) \times 3 =$   $3 \times (5^2 - 10) =$  [4]

.....  
.....

c.  $3^2 \times (15 - 11) =$   $17 + 8 \div 2 =$  [4]

.....  
.....

d.  $12 \div 4 + 2 \times 13 =$   $6 \times 4 + 3 \times 5 =$  [6]

.....  
.....  
.....

e.  $(6 - 1) \times 3 - 8 \div 2 =$   $8^2 - (5 - 2)^2 + 4 \times 6$  [6]

.....  
.....  
.....

2. Calculate the following

- |                             |                            |  |
|-----------------------------|----------------------------|--|
| a. $7^2 = \dots\dots\dots$  | d. $3^3 = \dots\dots\dots$ | g. $\sqrt{81} = \dots\dots\dots$   |
| b. $8^2 = \dots\dots\dots$  | e. $1^3 = \dots\dots\dots$ | h. $\sqrt{144} = \dots\dots\dots$  |
| c. $11^2 = \dots\dots\dots$ | f. $2^5 = \dots\dots\dots$ | i. $\sqrt{400} = \dots\dots\dots$ <span style="float: right;">[9]</span> |

3. Do you remember this from the last homework?

- a. Write down all the factors of 32 ..... [2]
- b. Write down the first 8 multiples of 7 ..... [2]
- c. Write down all the prime numbers between 15 and 25 ..... [2]
- d. Write down a square number between 40 and 60 .....[1]

To improve I need to .....

1. Calculate the following [4]

a.  $83.2 \times 100$  ..... c.  $341 \div 100$  .....

b.  $6.02 \times 100$  ..... d.  $7.2 \div 10$  .....

2. Answer the following

a. Write three hundred and five thousand in figures (numbers) [1]

.....

b. Write 15 400 000 in words [1]

.....

c. Write five **hundredths** in figures (numbers) [1]

.....

d. Write 0.7 in words [1]

.....

3. Put the following in order of size from **smallest** to **biggest** [4]

a.            6.12            61            0.61            6.1            6.02

.....

b.            5.09            5.1            5.99            5.19            5.90

.....

4. Calculate **SHOW YOUR WORKING OUT** [8]

a.  $12.67 + 5.82$

c.  $12.67 \times 3$

.....  
.....  
.....

b.  $12.6 - 5.8$

d.  $6.3 \div 3$

.....  
.....  
.....

5. Round the following [3]  
 a. 78 to the nearest 10 ..... b. 341 to the nearest 100 .....  
 c. 5.12 to the nearest whole number .....

4. Round to 1 decimal place [2]  
 a. 4.67 ..... b. 0.823 .....

5. A Calculator costs £9.97, **estimate** the cost of five calculators [2]  
 .....

**When answering the following questions show any calculations you needed to make**

6. John bought a magazine for £3.95 he paid with £10, how much change did he get? [2]  
 .....

7. Sian bought 4 packs of smarties at 57p per packet, how much did she spend?



- ..... [2]

8. Charles went to 'The Chippy' and bought [2]  
 a bag of Chips and two small sausages  
 How much did he spend ?

The Chippy	
Large Chips	£1.50
Bag of Chips	£1.20
Fish	£2.10
Sausage Large	£0.85
Small	£0.55

9. List the smallest number of coins you need to make £1.36 ? [2]  
 .....

To improve I need to .....

Name .....

TIME

$\frac{\dots}{35} \times 100 = \dots\%$

- 1. Change the following from 12hour clock to 24hour clock [4]
  - a. 8:07am .....
  - b. 7:15pm .....

- 2. Change the following from 24hour clock to 12hour clock [4]
  - a. 14:16 .....
  - b. 21:34 .....

- 3. Bill gets the 10:35 train from Holyhead station and arrives in Chester at 12:14 how long was his journey? ..... [2]

4.

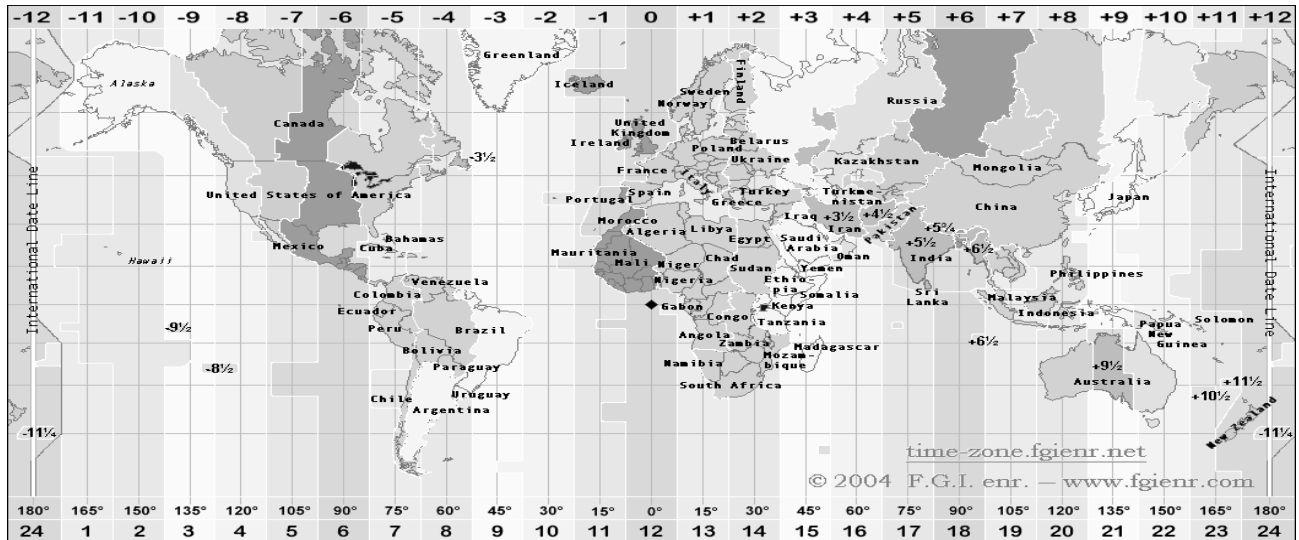
Holyhead Summerhill	0500	....	0600	....	0630	0645	....	0710	....	0745	....	0840	0855	....
Holyhead, Tesco	....	....	....	....	0637	....	....	....	....	....	....	0847	....	....
Trearddur	....	....	0608	....	....	0653	....	0718	....	0749	....	....	0905	....
Valley Crossroads	0510	....	0616	....	0641	0701	....	0726	....	0755	....	0855	0913	....
RAF Valley	0519	....	....	....	....	0712	....	0737	....	0801	....	....	0926	....
Bodedern School	....	....	....	....	....	....	....	....	....	0814	....	....	....	....
Bryngwran	....	....	0626	....	0649	0718	....	0743	....	0819	....	0905	0932	....
Rhostrehwfa	....	....	0639	....	0702	....	....	0756	....	....	....	0918	....	....
Bodffordd	....	....	....	....	....	0731	....	....	....	0834	....	....	0945	....
Llangefni Post Office	0538	0538	0645	0645	0708	0737	0737	0802	0802	0840	0840	0924	0951	0951

- a. How long does the 0630 bus take to go from Holyhead to Llangefni ? ..... [2]
- b. Ben Lives in Valley and needs to be in work in Llangefni by 9:00am which bus must he catch ? ..... [2]

Llangefni High Street	1636	1711	1711	1802	1802	1809	1809	1851	1851	1904	1941	1941	2005	2005
Bodffordd	....	....	1717	....	....	....	1815	....	....	....	....	1946	....	....
Rhostrehwfa	1642	....	....	....	....	....	....	....	1857	1910	....	....	....	2010
Bryngwran	1655	....	....	....	1821	....	....	....	1910	1923	....	1959	....	2019
Bodedern School	....	....	1732	....	....	....	1830	....	....	....	....	....	....	2024
RAF Valley	....	....	1737	....	....	....	....	....	1916	....	....	....	....	....
Y Fali/Valley	1704	....	....	....	....	....	....	....	....	1932	....	....	....	....
Holyhead, Tesco	1712	....	....	....	....	....	....	....	....	1938	....	....	....	....
Valley Crossroads	....	....	1750	....	1830	....	1837	....	1927	....	....	2008	....	2031
Trearddur	....	....	1758	....	1838	....	1845	....	1935	....	....	2016	....	2037
Holyhead Port	....	....	....	....	....	....	....	....	1941	....	....	....	....	....
Holyhead Summerhill	1719	....	1808	....	1848	....	1855	....	1946	1942	....	2026	....	2047

- c. Which bus is the quickest the 16:36 from Llangefni to Holyhead or the 17:11 from Llangefni to Holyhead and **by how much** ..... [2]
- d. Only one bus stops at Holyhead Port, why does it stop at this time? ..... [1]

5. Look at the map and Table of World time zone.



City	Los Angles	New York	Rio de Janerio	Paris	Moscow	Mumbai	Beijing	Tokyo	Sydney
Hours Different	-8	-5	-3	+1	+4	+5½	+8	+9	+10

a. If it's 13:00 in the UK what time is it [6]

i) Moscow ..... ii) Mumbai ..... iii) Los Angles .....

b. If its 7:00 am in New York, what time is it in London ? ..... [2]

c. If its 10:00 am in Rio de Janerio, what time is it in Beijing ? ..... [2]

6. How many

a. seconds in 1 hour? ..... [1]

b. hours are there in a week ? ..... [1]

c. days in the have there been this year so far? ..... [2]

7. Remember  $Speed = \frac{Distance}{Time}$

a. John bikes 60 miles in 4 hours      What is John's speed in mph ?  
 ..... [2]

b. Sian drives the same distance in 2 hours 30 minutes  
 What is Sian's speed in mph ? ..... [2]

To improve I need to .....

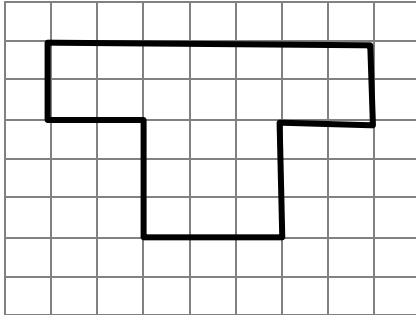


Name .....

Area

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

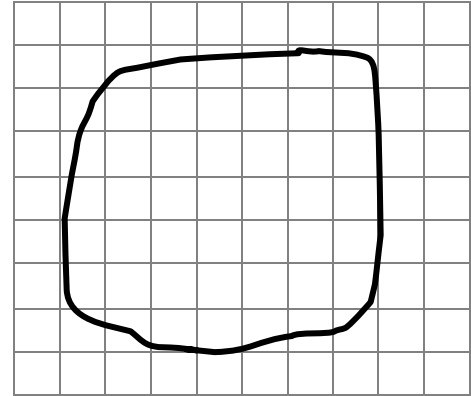
1. Find the **perimeter** and **area**



a. Perimeter..... [2]

b. Area ..... [1]

2. Estimate the **area** of this shape



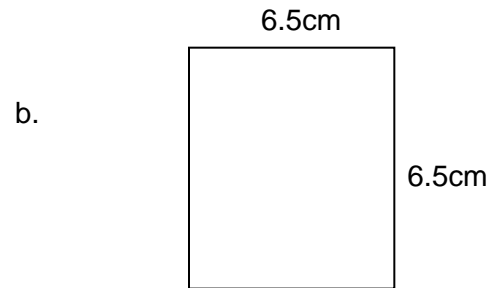
Area .....[2]

2. Find the **area** and **perimeter** of the following rectangles, **Write down the correct units.**



Area = ..... [2]

Perimeter = ..... [2]

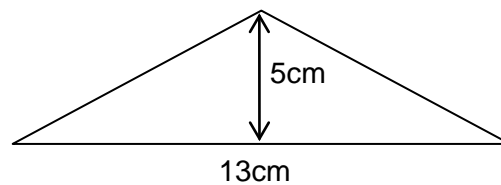


Area = .....[2]

Perimeter = .....[2]

3. Find the area of the Triangle

Area = ..... [2]



4. A rectangle has an area of 42cm<sup>2</sup> if its length is 6cm.  
What is the **perimeter** of the rectangle

..... [3]

5. A triangle has an area of 56cm<sup>2</sup> and a base length of 14cm what is its height ?

..... [2]

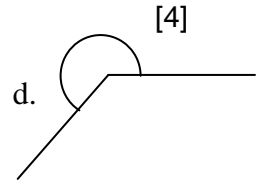
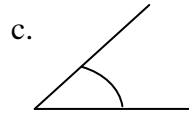
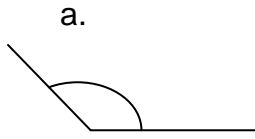
To improve I need to .....

Name .....

**Angles**

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

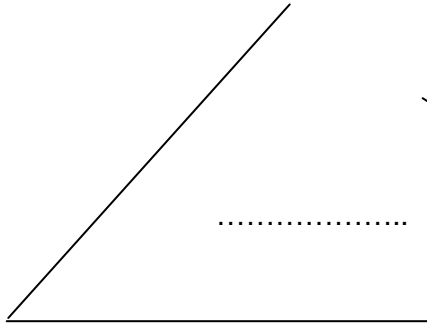
1. Write the name for each of these angles.



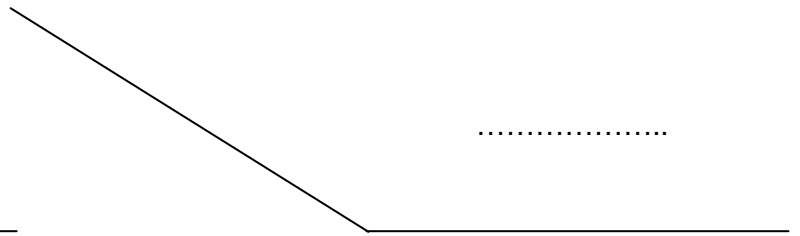
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2. Measure the following angles

a.



b.



[2]

3. Draw the following angles:

a.  $20^\circ$

\_\_\_\_\_

b.  $145^\circ$

\_\_\_\_\_

c.  $235^\circ$

\_\_\_\_\_

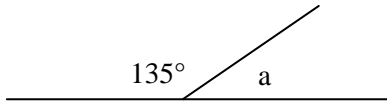
d.  $352^\circ$

\_\_\_\_\_

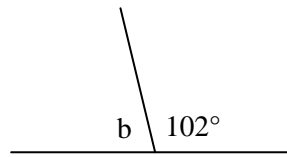
[4]

4. Calculate the unknown angle.

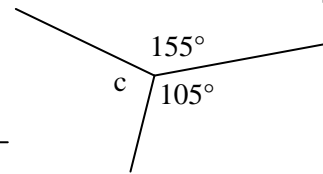
[6]



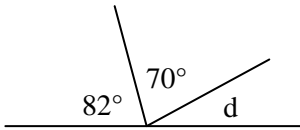
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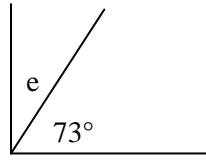
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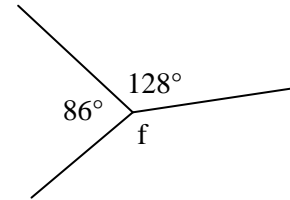
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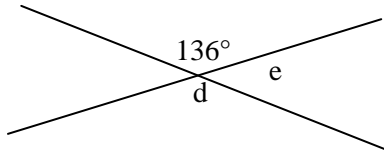
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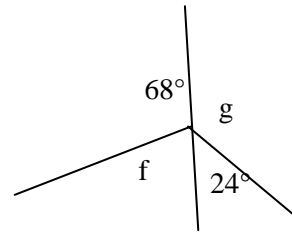
5. Calculate the unknown angle.

[4]



.....

.....



.....

.....

To improve I need to .....

**Name** ..... **Functional Mathematics**  $\frac{\dots}{10} \times 100 = \dots\%$

1. An ice hockey league published the following information about the total attendance at matches for the years 2009, 2010 and 2011

	Number of teams	Total Attendance		
		2009	2010	2011
Division 1	10	19 080	21 354	21 876
Division 2	10	12 150	12 276	11 879
Division 3	9	4680	3684	2856

- a. What was the total attendance for all matches in 2011 (show your working out in full) [2]

- b. In division 3, how many more people attended the matches in 2009 than in 2011? [2]

- c. In 2009, all the matches in all three divisions were played on Friday evenings. On any give Friday evening, in which division was it most likely that one of the teams would not have a match?  
Give a reason for your answer [1]

- d. In a junior hockey league there are only four teams. Each team must play every other team once only. **Showing how you got your answer**, find out how many maths are played altogether in this junior league. [2]

Total number of matches = .....

2. For a team playing in the hockey league, the total number of points is calculated as shown below.

**Points gained = games won × 3 + games drawn × 1**

Oldborough Town have played 25 games.  
They have won 13 games, lost 5 and have drawn the other games.  
How many points have they gained? [3]

.....

.....

.....

*To improve I need to .....*