

# Ysgol Uwchradd Caergybi

## Mathematics Department Homework Pack

### Year 8      Module 6 Foundation

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Algebra 2	2	.....	.....	..... .....
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Angles 2	4	.....	.....	..... .....
Estimates	5	.....	.....	..... .....
Numeracy 1	6	.....	.....	.....
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Name .....

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

Name .....

**Algebra(1)**

$\frac{\dots}{25} \times 100 = \dots\%$

1. Simplify the following expressions

- a.  $3b + 4b$  ..... [1]
- b.  $6a - 4a$  ..... [1]
- c.  $4a + 3a + 7b + 2b$  ..... [2]
- d.  $7a + 5a + 4b - 2b$  ..... [2]
- e.  $3a + 5b + 2a - 2b$  ..... [2]

2.  $a = 3$   $b = 4$  By substituting find the values of the following expressions

- a.  $a + b$  ..... [1]
- b.  $a - b$  ..... [2]
- c.  $5a$  ..... [2]
- d.  $3b$  ..... [2]
- e.  $5a + 3b$  ..... [2]

3. Solve – Find the value of ?

- a.  $? + 7 = 10$  [1] .....  
.....
- c.  $? - 4 = 21$  [1] .....  
.....
- b.  $3x? = 18$  [1] .....  
.....  
.....
- f.  $? \div 2 = 10$  [1] .....  
.....  
.....

4. Solve – Find the value of  $x$

- a.  $x + 7 = 18$  [1] .....  
.....
- g.  $x - 10 = 12$  [1] .....  
.....
- b.  $5x = 15$  [1] .....  
.....  
.....
- h.  $x + 9 = 17$  [1] .....  
.....  
.....

To improve I need to .....

1. Solve the following

a.  $x + 9 = 15$  [1]

.....  
.....

c.  $4x = 24$  [1]

.....  
.....

b.  $\frac{x}{3} = 7$  [1]

.....  
.....

d.  $x - 8 = 2$  [1]

.....  
.....

2.  $a = 2$   $b = 5$  By substituting find the values of the following expressions

a.  $a + b$  ..... [1]

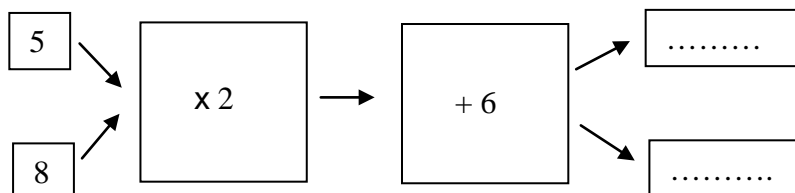
b.  $a - b$  ..... [1]

c.  $6a$  ..... [1]

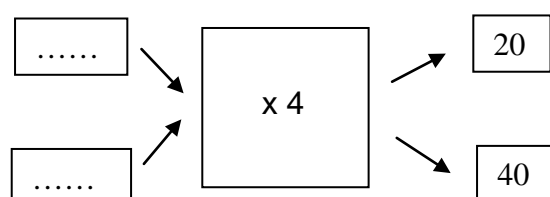
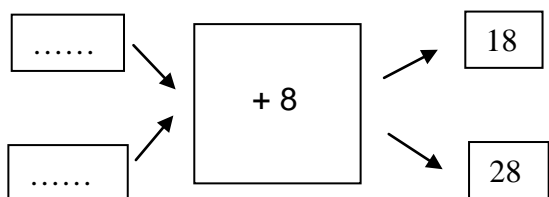
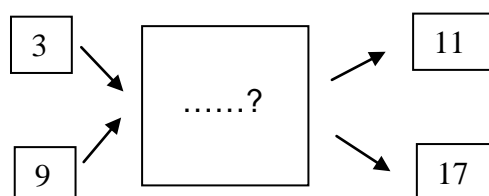
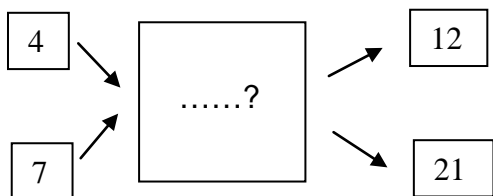
d.  $2b$  ..... [1]

e.  $4a + 3b$  ..... [2]

3. Function Machines [2]

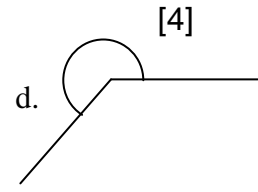
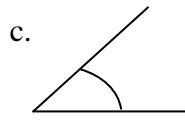
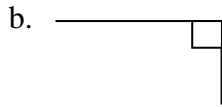
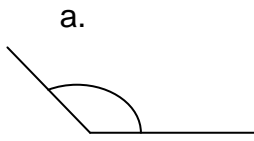


4. Function Machines Fill in the blanks [6]



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1. Write the name for each of these angles.



.....

2. Draw the following angles:

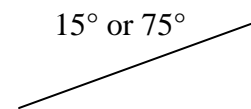
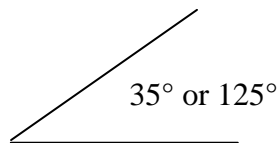
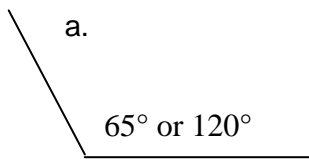
a.  $20^\circ$

b.  $145^\circ$

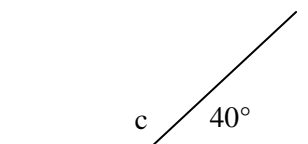
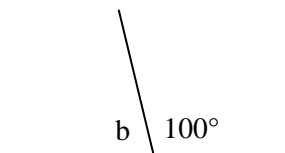
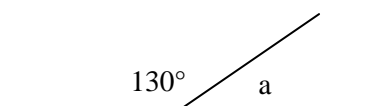
\_\_\_\_\_

\_\_\_\_\_

3. Which is the correct angle. Circle the correct value.



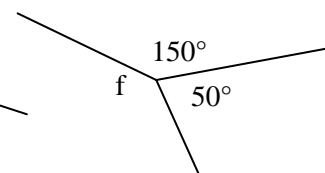
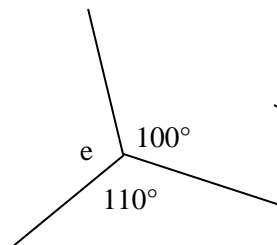
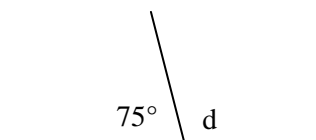
4. Calculate the unknown angle



.....

.....

.....



.....

.....

.....

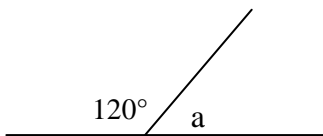
To improve I need to .....

Name .....

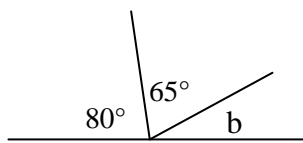
### Angles-2

$$\frac{\dots}{16} \times 100 = \dots\%$$

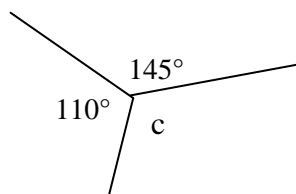
1. Calculate the unknown angle. [4]



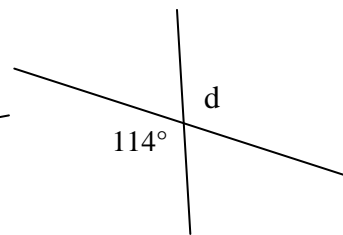
a.....



b.....



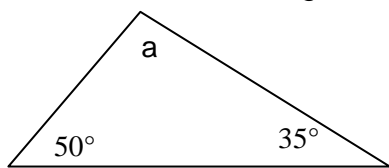
c.....



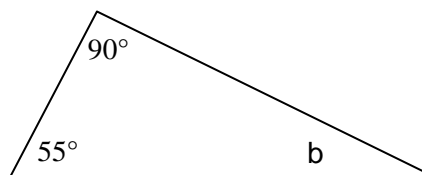
d.....

2. Angles inside a triangle add up to .....<sup>o</sup> [1]

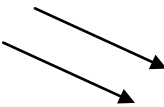
3. Calculate the unknown angle [2]



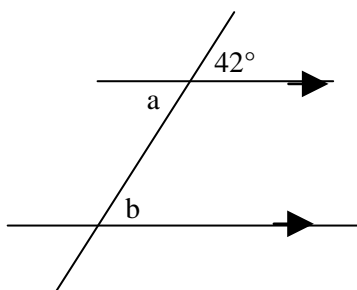
a.....



b.....

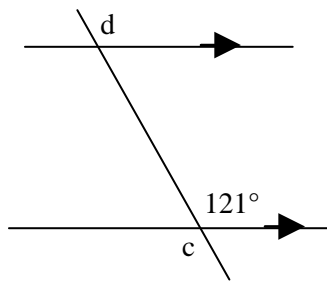
4. These two lines  are called ..... lines [1]

5. Calculate the unknown angle. [5]



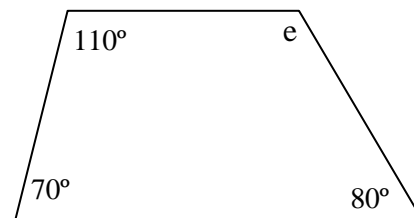
a.....

b.....



c.....

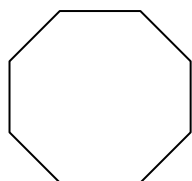
d.....



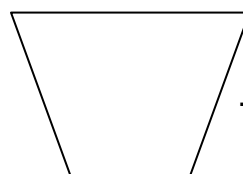
e.....

6. Name the type of angle that is between 90° and 180° ..... [1]

7. Name the following Shapes [2]



.....



.....

To improve I need to .....

Name .....

## Estimates

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

1. Round the following [8]
  - a. 4.7 to the nearest whole number.....
  - b. 3.2 to the nearest whole number.....
  - c. 48 to the nearest 10 .....
  - d. 83 to the nearest 10 .....
  - e. 822 to the nearest 10 .....
  - f. 680 to the nearest 100 .....
  - g. 310 to the nearest 100 .....
  - h. 1560 to the nearest 100 .....
  
2. Round the following to the number of decimal place shown [4]
  - a. 4.35 to 1.d.p .....
  - b. 87.34 to 1.d.p .....
  - d. 0.79 to 1.d.p .....
  - e. 19.85 to 1.d.p .....
  
3. Calculate the following. Give your answers correct to 1 decimal place [4]  
(Use a calculator)
  - a.  $\sqrt{37}$  .....
  - c.  $1.75^2$  .....
  
4. Round the following to the given number of significant figures. [2]
  - a. 280            1.s.f. ....
  - b. 4100           1.s.f. ....
  
5. Estimate the following [2]
  - a. The distance from Holyhead to Cardiff is 205.3 miles this is roughly ..... miles
  - b. The weight of a cow is 587kg, this is roughly ..... kg
  
6. **Estimate** the answers to these using numbers rounded to 1.s.f. [12]  
Show clearly the numbers you've used
  - a.  $3.8 \times 7$  .....
  - b.  $73 \times 80$  .....
  - c.  $800 \times 7.9$  .....
  - d.  $42 \times 300$  .....

To improve I need to .....

Name .....

**Numeracy -1**

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

**ADDITION**

$$\begin{array}{r} 1. \quad \quad 8 \ 8 \\ + \quad \quad 6 \ 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad \quad 8 \ 3 \\ + \quad \quad 6 \ 7 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad \quad 5 \ 6 \ 8 \\ + \quad \quad 7 \ 2 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad \quad 6 \ 3 \ 7 \\ + \quad \quad 8 \ 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad \quad 5 \ 7 \ 6 \\ + \quad \quad 2 \ 5 \ 8 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad \quad 5 \ 6 \ 4 \\ + \quad \quad 5 \ 6 \ 9 \\ \hline \\ \hline \end{array}$$

**SUBTRACTION**

$$\begin{array}{r} 10. \quad \quad 8 \ 6 \\ - \quad \quad 3 \ 9 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad \quad 8 \ 5 \\ - \quad \quad 2 \ 8 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad \quad 6 \ 5 \ 3 \\ - \quad \quad 6 \ 2 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad \quad 3 \ 4 \ 4 \\ - \quad \quad 7 \ 7 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad \quad 5 \ 3 \ 8 \\ - \quad \quad 4 \ 7 \ 2 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 17. \quad \quad 9 \ 3 \ 3 \\ - \quad \quad 5 \ 6 \ 5 \\ \hline \\ \hline \end{array}$$

**NON CALCULATOR**

$$\begin{array}{r} 3. \quad \quad 8 \ 7 \\ + \quad \quad 7 \ 9 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad \quad 7 \ 6 \ 4 \\ + \quad \quad 5 \ 9 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad \quad 7 \ 9 \ 7 \\ + \quad \quad 3 \ 4 \ 6 \\ \hline \\ \hline \end{array}$$

**NON CALCULATOR**

$$\begin{array}{r} 12. \quad \quad 7 \ 3 \\ - \quad \quad 5 \ 6 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad \quad 8 \ 5 \ 2 \\ - \quad \quad 8 \ 7 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 18. \quad \quad 6 \ 7 \ 4 \\ - \quad \quad 4 \ 8 \ 6 \\ \hline \\ \hline \end{array}$$

To improve I need to .....

Name .....

## Numeracy -2

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

### MULTIPLICATION

1.

$$\begin{array}{r} 78 \\ \times 6 \\ \hline \\ \hline \end{array}$$

2.

$$\begin{array}{r} 83 \\ \times 7 \\ \hline \\ \hline \end{array}$$

### NON CALCULATOR

3.

$$\begin{array}{r} 87 \\ \times 3 \\ \hline \\ \hline \end{array}$$

4.

$$\begin{array}{r} 678 \\ \times 5 \\ \hline \\ \hline \end{array}$$

5.

$$\begin{array}{r} 527 \\ \times 6 \\ \hline \\ \hline \end{array}$$

6.

$$\begin{array}{r} 846 \\ \times 8 \\ \hline \\ \hline \end{array}$$

7

3	5	
3	3	3
6	6	6

8

5	2	
3	3	3
5	5	5

9

6	5	
2	2	2
5	5	5

### DIVISION

1

$$\begin{array}{r} \phantom{00} \\ 3 \overline{) 156} \end{array}$$

2

$$\begin{array}{r} \phantom{00} \\ 4 \overline{) 628} \end{array}$$

3

$$\begin{array}{r} \phantom{00} \\ 8 \overline{) 856} \end{array}$$

4

$$\begin{array}{r} \phantom{00} \\ 4 \overline{) 256} \end{array}$$

5

$$\begin{array}{r} \phantom{00} \\ 7 \overline{) 182} \end{array}$$

6

$$\begin{array}{r} \phantom{00} \\ 9 \overline{) 605} \end{array}$$

To improve I need to .....



Name .....

**Numeracy -3**

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

**NON CALCULATOR Complete the multiplication grid**

X	3	1	4	8	5	9	6	10	7	2
6										
1										
8										
5										
3										
4										
2										
10										
9										
7										

To improve I need to .....

Name .....

**Numeracy -4**

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

1. Write down the first 10 Square numbers

Answer ..... [2]

2. Write down the first 10 multiples of 8

Answer ..... [2]

3. Write down all the factors of

a. 40 Answer ..... [2]

b. 28 Answer ..... [2]

4. Write down value of

a.  $7^2$  Answer .....  $8^2$  Answer ..... [4]

b.  $\sqrt{36}$  Answer .....  $\sqrt{81}$  Answer ..... [4]

5. Write down a

a. Square number between 20 and 30 Answer ..... [2]

b. Square number between 30 and 40 Answer ..... [2]

c. Square number between 40 and 50 Answer ..... [2]

6. What number must be added to 46 to make 67? [2]

Answer .....

7. What is the difference between 76 and 59 [2]

Answer .....

To improve I need to .....