

St Ninian's High School



Level E CHECKLIST

- I understand this part of the course = 👍
- I am unsure of this part of the course = 🙋
- I do not understand this part of the course = 🙏

Name _____ Class _____ Teacher _____

Level E Course Checklist

Topic 1 - Whole Numbers (Chapter 1)



1. **Addition** – Layout important
2. **Subtraction** – Layout important
3. **Divide** by a single digit
4. **Multiplication** by a single digit.
5. **Multiplication** by 10, 100 and 1000
 $78 \times 1000 = 78000$ (Add on 3 zeros)
6. **Division** by 10, 100 and 1000
 $8600 \div 100 = 86$ (Remove 2 zeros)
7. **Multiplying** by 20, 30 and 500 etc...
 $83 \times 500 = 83 \times 100 \times 5 = 8300 \times 5$ etc..
8. **Division** by 20, 30 and 500 etc....
 $4500 \div 500 = 4500 \div 100 \div 5 = 45 \div 5 = 9$
9. **Factors**
 Factors of 8 are {1,2,4,8}
10. **Prime Numbers**
 A prime number has **exactly** 2 factors.

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Pupil Signature _____

Parental Signature _____

Level E Course Checklist

Topic 2 – Decimal Numbers (Chapter 2)



1. Addition - Layout important
2. **Subtraction** – Layout important
3. **Divide** by a single digit
4. **Multiplication** by a single digit.
5. **Multiplication** by 10, 100 and 1000
 $3.56 \times 100 = 356$ (move point to the right 2 places)
6. **Division** by 10, 100 and 1000
 $7.38 \div 1000 = 0.0738$ (move point to the right 3 places)
7. **Multiplying** by 20, 30 and 500 etc...
 $2.6 \times 500 = 2.6 \times 100 \times 5 = 260 \times 5$ etc..
8. **Division** by 20, 30 and 500 etc....
 $4795 \div 500 = 4795 \div 100 \div 5 = 47.95 \div 5 = 9.99$

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Level E Course Checklist

Topic 3 – Algebra (Chapter 4)



1. **Making up expressions**

$$2x + 1$$

2. **Evaluating an expression**

$$a = 1 \quad b = (-2) \quad c = 5 \quad abc = 1 \times (-2) \times 5 = -10$$

3. **Like terms**

$$x + x + y + y + x = 3x + 2y$$

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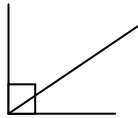
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Level E Course Checklist

Topic 4 – Angles (Chapter 3)



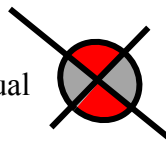
1. **Right Angle**
Adds to 90°



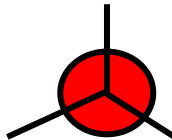
2. **Straight Line**
Adds to 180°



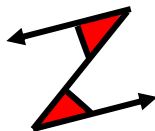
3. **Vertically Opposite**
Opposite angles are equal



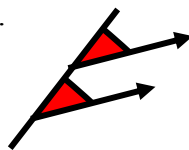
4. **Angles around a point.**
Adds up to 360°



5. **Alternate Angles (Z-angles)**
Alternate angles are equal



6. **Corresponding Angles (F-Angles)**
Corresponding angles are equal.



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Topic Test 1 - 4

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Level E Course Checklist

Topic 5 – Information Handling (Chapter 5)



1. **Frequency Table** (Tally Table)
Reading and Constructing

2. **Bar Charts**
Reading and Constructing



3. **Line Graphs**
Reading and Constructing



4. **Pie – Charts**
Reading and Constructing



5. **Mean and Range**

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Level E Course Checklist

Topic 6 – Time & Temperature (Chapter 6)



1. **Converting between 12 / 24 clock**
 7.30pm ⇒ 1930 2215 ⇒ 1015pm



2. **Time Intervals**
 Counting Method

3. **Interpreting Timetables**

Saturday	Opp	Opp	Opp	Opp	Opp
08:00	08:00	08:00	08:00	08:00	08:00
08:15	08:15	08:15	08:15	08:15	08:15
08:30	08:30	08:30	08:30	08:30	08:30
08:45	08:45	08:45	08:45	08:45	08:45
09:00	09:00	09:00	09:00	09:00	09:00
09:15	09:15	09:15	09:15	09:15	09:15
09:30	09:30	09:30	09:30	09:30	09:30
09:45	09:45	09:45	09:45	09:45	09:45
10:00	10:00	10:00	10:00	10:00	10:00
10:15	10:15	10:15	10:15	10:15	10:15
10:30	10:30	10:30	10:30	10:30	10:30
10:45	10:45	10:45	10:45	10:45	10:45
11:00	11:00	11:00	11:00	11:00	11:00
11:15	11:15	11:15	11:15	11:15	11:15
11:30	11:30	11:30	11:30	11:30	11:30
11:45	11:45	11:45	11:45	11:45	11:45
12:00	12:00	12:00	12:00	12:00	12:00
12:15	12:15	12:15	12:15	12:15	12:15
12:30	12:30	12:30	12:30	12:30	12:30
12:45	12:45	12:45	12:45	12:45	12:45
13:00	13:00	13:00	13:00	13:00	13:00
13:15	13:15	13:15	13:15	13:15	13:15
13:30	13:30	13:30	13:30	13:30	13:30
13:45	13:45	13:45	13:45	13:45	13:45
14:00	14:00	14:00	14:00	14:00	14:00
14:15	14:15	14:15	14:15	14:15	14:15
14:30	14:30	14:30	14:30	14:30	14:30
14:45	14:45	14:45	14:45	14:45	14:45
15:00	15:00	15:00	15:00	15:00	15:00
15:15	15:15	15:15	15:15	15:15	15:15
15:30	15:30	15:30	15:30	15:30	15:30
15:45	15:45	15:45	15:45	15:45	15:45
16:00	16:00	16:00	16:00	16:00	16:00
16:15	16:15	16:15	16:15	16:15	16:15
16:30	16:30	16:30	16:30	16:30	16:30
16:45	16:45	16:45	16:45	16:45	16:45
17:00	17:00	17:00	17:00	17:00	17:00
17:15	17:15	17:15	17:15	17:15	17:15
17:30	17:30	17:30	17:30	17:30	17:30
17:45	17:45	17:45	17:45	17:45	17:45
18:00	18:00	18:00	18:00	18:00	18:00
18:15	18:15	18:15	18:15	18:15	18:15
18:30	18:30	18:30	18:30	18:30	18:30
18:45	18:45	18:45	18:45	18:45	18:45
19:00	19:00	19:00	19:00	19:00	19:00
19:15	19:15	19:15	19:15	19:15	19:15
19:30	19:30	19:30	19:30	19:30	19:30
19:45	19:45	19:45	19:45	19:45	19:45
20:00	20:00	20:00	20:00	20:00	20:00
20:15	20:15	20:15	20:15	20:15	20:15
20:30	20:30	20:30	20:30	20:30	20:30
20:45	20:45	20:45	20:45	20:45	20:45
21:00	21:00	21:00	21:00	21:00	21:00
21:15	21:15	21:15	21:15	21:15	21:15
21:30	21:30	21:30	21:30	21:30	21:30
21:45	21:45	21:45	21:45	21:45	21:45
22:00	22:00	22:00	22:00	22:00	22:00
22:15	22:15	22:15	22:15	22:15	22:15
22:30	22:30	22:30	22:30	22:30	22:30
22:45	22:45	22:45	22:45	22:45	22:45
23:00	23:00	23:00	23:00	23:00	23:00
23:15	23:15	23:15	23:15	23:15	23:15
23:30	23:30	23:30	23:30	23:30	23:30
23:45	23:45	23:45	23:45	23:45	23:45
24:00	24:00	24:00	24:00	24:00	24:00

4. **Numbers below Zero**
 Thermometer -2°C,
 Seabed -1500ft,
 Bank Account -£5



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Level E Course Checklist

Topic 7 – Position & Movement (Chapter 7)



1. **Three Figure Bearings**

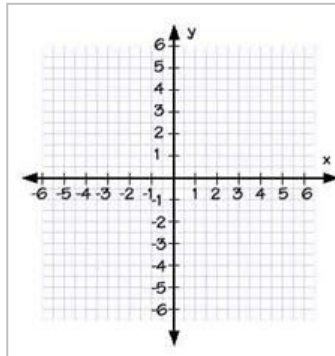
e.g. 087° always three figures

2. **Back Bearing**

Bearing of 120° back bearing is 300°

3. **Coordinate Grid / (4 Quadrants)**

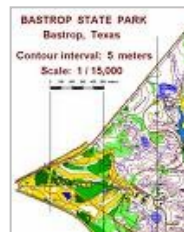
e.g. (1,1) ,
 (-2,3),
 (-4,-5),
 (6,-2)



4. **Scales on a Map**

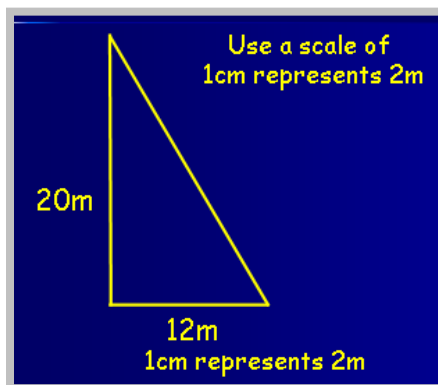
1 : 300

1cm represents 300cm on the map



5. **Scale Drawings**

Be able to construct a scale drawing.



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Level E Course Checklist

Topic 8 – Algebra (Chapter 8)



1. **Solving equations of the type**

$$2y = 6$$

2. **Making up Equations**

$$2y + 8 = 10$$

3. **Solving Equations**
Balancing Method



$$2x + 5 = 11$$

$$2x = 6$$

$$x = 3$$

4. **Solving Harder Equations of the type**

$$13 - 3y = 9$$

5. **Solving Equations with Fractions**

$$10 - \frac{1}{3}y = 4$$

6. **Solving Inequalities**

> greater than

< less than

≤ less than or equal to

≥ greater than or equal to

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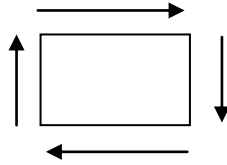
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Level E Course Checklist

Topic 9 – Measurement (Chapter 9)



1. **Perimeter**
The outside of a shape



2. **Length**
Millimetres (mm)
Centimetres (cm)
Metres (m)
Kilometres (km)

3. **Working with Scales & Scale Drawing**
 $\text{mm} \Rightarrow (\div 10) \text{ cm} \Rightarrow (\div 100) \text{ m} \Rightarrow (\div 1000) \text{ km}$
 $\text{mm} \Leftarrow (\times 10) \text{ cm} \Leftarrow (\times 100) \text{ m} \Leftarrow (\times 1000) \text{ km}$
1 : 500 means 1cm represents 500cm in real-life

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Level E Course Checklist

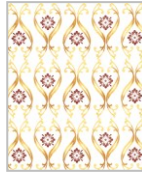
Topic10 – Symmetry & Tiling (Chapter 10)

- 1. **Reflection**
Mirror image



- 2. **Rotational**
Order of rotation 1, 2, 3, 4 etc...

- 3. **Glide**
Wallpaper design



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Topic Test 5 – 10

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Topic 11 – Fraction & Percentages (Chapter 15)



1. The term Fraction

$$\frac{\text{numertor}}{\text{denominator}} = \frac{4}{5}$$

2. Equivalent Fraction

$$\frac{3}{6} = \frac{3^{+3}}{6^{+3}} = \frac{1}{2}$$

3. Fraction of a Quantity

$$\frac{3}{4} \text{ of } 20 \quad 4 \overline{)20} \quad 5 \times 3 = 15$$

4. The term Percentage

Out of a 100

5. Calculating a Percentage

30% of 80

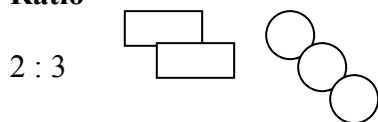
10% \Rightarrow 8

30% \Rightarrow 8x3 = 24

6. Improper Fraction & Mixed Numbers

$$\text{Improper Fraction} = \frac{10}{3} \quad \Rightarrow \quad \text{Mixed Number} = 3\frac{1}{3}$$

7. Ratio



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Level E Course Checklist

Topic 12 – Area (Chapter 11)

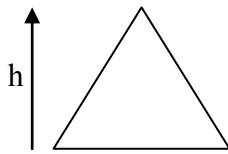


1. Rectangle



L
 $Area = Length \times Breadth$

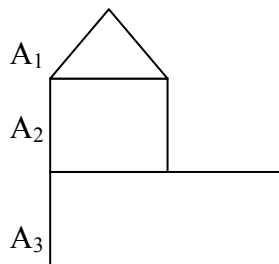
2. Triangle



b
 $Area = \frac{1}{2} \times base \times height$

3. Composite

Area that is made up from basic shapes



$Area = A_1 + A_2 + A_3$

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Topic 13 – Linear Patterns (Chapter 12)



1. Square Numbers

1, 4, 9, 16, 25, 36

2. Triangular Numbers

1, 3, 6, 10, 15, 21, 28

3. Simple Linear Pattern Rule

<i>g</i>	0	1	2	3	4
<i>C</i>	0	5	10	15	20

Find the difference in *C*

$$C = 5g$$

4. Complicated Linear Pattern Rule

<i>a</i>	1	2	3	4
<i>b</i>	3	5	7	9

Find the difference in *b*

Find the correction factor

$$b = 3a + 1$$

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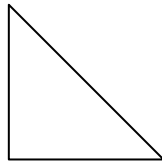
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Topic 14 – Triangles (Chapter 13)



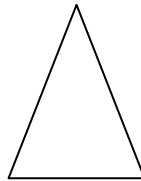
1. Right-Angle 90° Triangle



2. Isosceles Triangle

2 sides of equal length

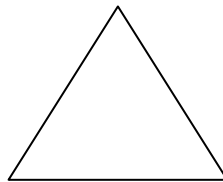
2 angles of equal size



3. Equilateral Triangle

3 sides of equal length

3 angles of equal size (60°)



4. Angles in a Triangle

Adds to 180°

5. Drawing ASA Triangles

ASA = side Angle Side

6. Drawing ASA Triangles

ASA = Side Angle Side

7. Drawing ASA Triangles

SSS = Side Side Side

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Topic 15 – Weight & Volume (Chapter 14)



1. Converting Weight

mg \Rightarrow ($\div 1000$) g \Rightarrow ($\div 1000$) kg \Rightarrow ($\div 1000$) Tonnes

mg \Rightarrow ($\times 1000$) g \Rightarrow ($\times 1000$) kg \Rightarrow ($\times 1000$) Tonnes

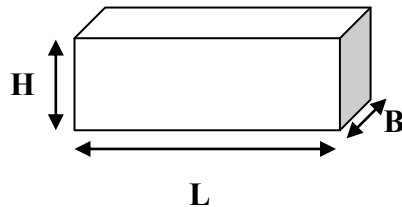
2. Convert Units of Liquid

1 litre = 1000 ml

1ml = 1 cm³



3. Volume



Volume = Length \times Breadth \times Height

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Topic Test 11 - 15

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