

## Westbourne House School Revision – Summer Term

### Y7 MATHS REVISION CHECKLIST

#### The Exam(s) will consist of:

One Non-calculator Paper – duration 60 minutes

One Calculator paper – duration 60 minutes

One short Maths Mental Arithmetic paper – duration 10 minutes (paper is done during a maths lesson)

#### Equipment you will need for the exam:

- Ruler (15cm and 30cm)
- Pencil
- Eraser and pencil sharpener
- Calculator (for the calculator paper)

TOPIC / PAPER	WHAT TO REVISE	DONE?
<u>Non-calculator Paper</u>	<p><b><u>Number</u></b></p> <ul style="list-style-type: none"> <li>• Place Value (including decimal)</li> <li>• BIDMAS</li> <li>• Decimal addition, subtraction, multiplication and division</li> <li>• Reverse calculations and number facts</li> <li>• Fractions / decimals / % - ordering mixed values and equivalent values</li> <li>• % of a number, fraction of a number</li> <li>• Fraction questions involving addition and subtraction</li> <li>• Fraction questions involving multiplication or division with fractions and an integer</li> <li>• Prime factors (cherry tree method or other)</li> </ul> <p><b><u>Algebra</u></b></p> <ul style="list-style-type: none"> <li>• Substitute</li> <li>• Simplify</li> <li>• Draw straight line graphs</li> <li>• Pictorial patterns</li> </ul> <p><b><u>Shape</u></b></p> <ul style="list-style-type: none"> <li>• Area of a triangle and rectangle</li> </ul>	

<u>Calculator paper</u>	<p><b><u>Number</u></b></p> <ul style="list-style-type: none"> <li>• Using a calculator</li> <li>• Rounding to decimal places</li> <li>• Ratio</li> <li>• Inverse operations</li> <li>• Find % Amounts</li> <li>• Converting between metric units</li> <li>• Time, distance and speed</li> <li>• Number sequences</li> </ul> <p><b><u>Algebra</u></b></p> <ul style="list-style-type: none"> <li>• Simplify an expression</li> <li>• Multiply out brackets</li> <li>• Factorise</li> <li>• Solve equations</li> <li>• Use algebra to problem solve</li> </ul> <p><b><u>Shape</u></b></p> <ul style="list-style-type: none"> <li>• 2D Shapes</li> <li>• Angle facts – parallel lines</li> <li>• Circle work – area, circumference and of part circles</li> </ul> <p><b><u>Data</u></b></p> <ul style="list-style-type: none"> <li>• Averages from a list</li> <li>• Reading from a graph</li> </ul>	
<u>Maths Mental Arithmetic</u>	<ul style="list-style-type: none"> <li>• Exam taken in classroom under exam conditions.</li> <li>• A sheet of calculations and number questions to be done as quickly as possible in 10 minutes.</li> <li>• No calculators to be used.</li> </ul>	
<b>NOTES/TIPS:</b>		
<ul style="list-style-type: none"> <li>• Revise by practising the questions below, using your exercise books and appropriate websites like <a href="http://www.mathletics.co.uk">www.mathletics.co.uk</a> or <a href="http://www.mymaths.co.uk">www.mymaths.co.uk</a></li> <li>• In all maths exams workings are essential. It must be assumed that any question worth more than 1 mark requires at least one line of working. Workings should not be “doodle” like but be clearly set out in a logical manor preferably starting at the top of the space provided and working in a downwards direction.</li> <li>• For any further information or guidance about revision or the actual exam, please contact the Head of Maths – Mrs Lucy Low (<a href="mailto:lflow@westbournehouse.org">lflow@westbournehouse.org</a>)</li> </ul>		

### **Number work**

1. I buy a CD costing £4.99 and a book costing £8.54. How much do I pay altogether?
2. A book costs £8.54 and a CD costs £4.99. How much more is the book than the CD?
3. I buy 6 books each costing £8.54. How much do I spend?
4. If 8 CDs cost £34.80. How much does 1 CD cost?
5. Write 0.34 as a fraction in its lowest terms
6. Write 7% as a decimal
7. Write 10.5% as a decimal

8. Write  $\frac{4}{25}$  as a %

9. Write  $\frac{7}{20}$  as a decimal

### **BIDMAS**

10.  $4 - 5 + 9 =$
11.  $4 + 5 \times 3 =$
12.  $3 + 5^2 + 2 =$

### **Prime numbers**

13. Write 42 and 28 as products of prime numbers (hint cherry tree or equivalent)
14. What is the largest odd number that divides exactly into 42?

### **Reverse calculations and number sentences**

(Hint: you should not be working these out long hand. ....use the information in the question)

15. If I know that  $34 \times 7 = 238$  then what does
  - a.  $3.4 \times 7 =$
  - b.  $2.38 \div 7 =$
  - c.  $238,000 \div 70 =$

17. What are the next 2 terms of the following sequences

a. 1 , 4 , 9 , 16 , .....

b. 1 , 4 , 7 , 10 , .....

c. 3, 7, 11, 15, .....

d. 7, 4, 1, .....

### **Fraction questions**

$$\frac{5}{8} + \frac{3}{5}$$

$$\frac{3}{8} - \frac{2}{7}$$

$$\frac{5}{8} \times \frac{3}{5}$$

$$\frac{5}{8} \div \frac{3}{5}$$

### **Ratio**

1. A recipe for 3 people says use 3 eggs, 120g flour and 150g of cheese.

How much of each ingredient will I need for

- a. 12 people
- b. 10 people

2. Chocolates are shared in the ratio 3:5 between Bill and Paul.

- a. If Bill gets 15. How many does Paul get?
- b. If there are 64 altogether. How many does Bill get?
- c. If they have a difference of 6. How many were there to begin with?

### **Speed and distance**

If I travel at 36 km per hour.

- a. How far do I travel in 3 hours?
- b. How long does it take me to go 105 km?

## **Algebra**

### **1. Substitution**

If  $a = 4$ ,  $b = 5$  and  $c = -6$ , what do the following equal

$$a + b + c =$$

$$3a =$$

$$3a^2 =$$

$$(3a)^2 =$$

$$b - c =$$

$$3bc =$$

### **2. Simplify**

Simplify the following expressions

$$a + a + b + b =$$

$$2a - 3b + 4a + 5b =$$

$$a \times a \times b =$$

$$2a^2 \times 3a =$$

### **3. Solving**

Solve the following equations

$$3x + 5 = 14$$

$$3x + 7 = x + 13$$

$$3x + 10 = 26 - x$$

$$5x + 10 = -2 - x$$

#### 4. Brackets

1. Multiply out the following brackets

$$3(x + 4) =$$

2. Multiply out the following brackets and then simplify

$$5 - 3(x + 4) =$$

(Be careful you MUST do the brackets first – remember BIDMAS)

3. Factorise the following expressions

$$5x + 15 =$$

$$2x^2 + 4x =$$

#### Averages

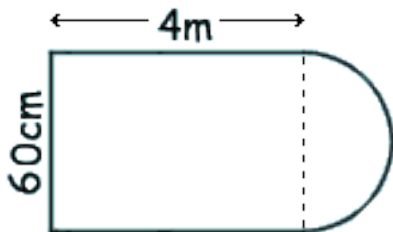
Find the mean, the mode, the median and the range of this set of numbers:

13, 10, 15, 11, 10, 14, 18, 22

#### Circle questions

1. A circle has a radius of 3cm. What is its area? What is its circumference?

2. Find the area and perimeter of the following shapes



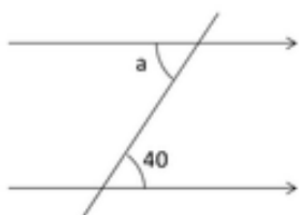
top sets only .....



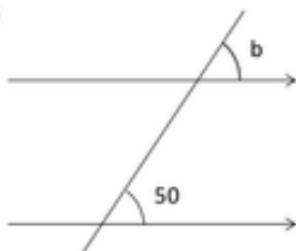
## Angles in Parallel Lines

Find the missing angles.

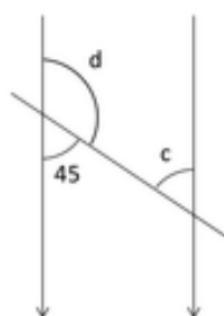
1)



2)



3)



4)

