

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 Aural – duration 20 minutes (paper is done during a maths lesson)

NB: Y7 Maths Set 1 will sit different papers.

Equipment you will need for the exam:

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

TOPIC / PAPER	WHAT TO REVISE	DONE?
Non-Calculator Paper	Decimal addition, subtraction, multiplication and division Fractions / decimals / % - ordering mixed values % of a number Wordy fraction questions involving addition and subtraction Wordy fraction questions involving multiplication or division with fractions and an integer Reverse calculations and number facts Ratio BIDMAS Algebra substitution solving equations Prime factors (cherry tree method or other)	

Calculator paper	<p>Averages – mean, mode, median and range Particularly using the total value from the mean</p> <p>Sequences and series of numbers</p> <p>Area of a triangle</p> <p>Drawing and interpreting pie charts</p> <p>Converting between metric units</p> <p>Rounding to the nearest 10, 100 and decimal place</p> <p>Finding % of a value</p> <p>Ratio</p> <p>Algebra – simplification Algebra – multiplying out brackets Algebra – factorising Algebra – writing algebra</p> <p>Time, distance and speed Converting between km/hour and m/s</p> <p>Nets and surface area of cubes and cuboids</p> <p>Circle work – area, circumference and compound shapes</p> <p>Bearings</p> <p>Pie charts – interpreting and drawing</p>	
Maths Aural	<ul style="list-style-type: none"> • Exam taken in classroom under exam conditions. • Questions are read out by the teacher and pupils are allowed to show their workings. • No calculators to be used. 	
NOTES/TIPS:		
<ul style="list-style-type: none"> • Revise by practising the questions below, using your note books and appropriate websites like www.mathletics.co.uk or www.mymaths.co.uk • 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. • For any further information or guidance about revision or the actual exam, please contact the Head of Maths – Mrs Barbara Langford (blangford@westbournehouse.org) 		

Number work

Decimal calculations

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?

Fractions / Decimals / %

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. Using the answer above what is the Highest Common Factor (HCF) of 42 and 28
15. Using the answer above what is the Lowest Common Multiple (LCM) of 42 and 28
16. What is the largest odd number that divides exactly into 42?
17. What would I need to multiply 28 by to make a perfect square?

Reverse calculations and number sentences

18. If I know that $34 \times 7 = 238$ then what does

- a. $3.4 \times 7 =$
- b. $2.38 \div 7 =$
- c. $340 \times 7 =$
- d. $238,000 \div 70 =$

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

Number patterns and rules (sequences)

19. 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,

Top sets: Can you write the n^{th} term of these?

Fraction questions

20. If I eat $\frac{2}{3}$ of a packet of biscuits a day. How many packets of biscuits will I eat in 6 days?

21. I have eaten 18 packets of biscuits. I eat $\frac{2}{3}$ of a packet a day. How long did it take me?

22. I eat $\frac{2}{5}$ of a pie and my brother eats $\frac{2}{7}$.

- a. How much have we eaten altogether?
- b. How much is left?
- c. My 2 sisters want to share the remainder. How much do they each get?

Ratio

23. 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

24. 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

25. 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?
- c. What is my speed in metres per second?

Algebra

Substitution

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

$$a + b + c =$$

$$3a =$$

$$3a^2 =$$

$$(3a)^2 =$$

$$b - c =$$

$$3bc =$$

Simplification

27. Simplify the following expressions

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

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

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

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

Solving

28. Solve the following equations

$$3x + 5 = 14$$

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

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

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

Brackets

29. Multiply out the following brackets

$$3(x + 4) =$$

30. Multiply out the following brackets and then simplify

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

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

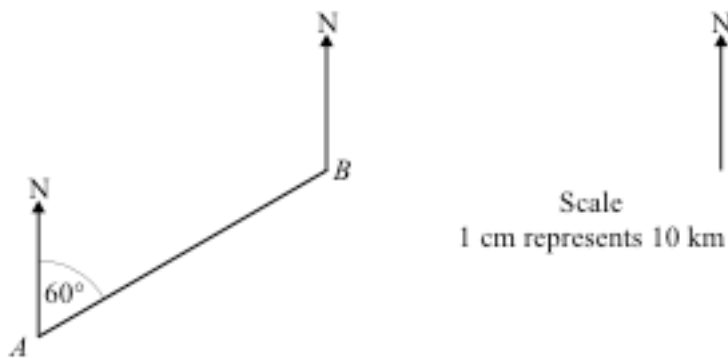
31. Factorise the following expressions

$$5x + 15 =$$

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

Bearings

32. The diagram below shows the positions of A and B. The diagram is drawn to scale an 1cm represents 10km.



- Use the diagram to calculate the distance from A to B
- C is due south of B. Write the three figure bearing of C from B
- C is also on a bearing of 150° from A . Mark the position C on the diagram.
- What distance is C from B?

Pie Charts

33. Translate the information supplied below of some of the Premiership goal scorers onto a pie-chart.

Player	Goals scored in one calendar year	Degrees on pie chart
Gareth Bale	30	
Robin van Persie	45	
Sergio Aguero	25	
Theo Walcott	20	
Total	120	360°

34. The following pie chart shows the type of pet that **60** people had at home



Fill in the following table

Pet	Degrees	Value
Dog	180°	

Cat	36 ⁰	
Budgie	36 ⁰	
Goldfish	36 ⁰	
Other		
1 person = _____ °		

Averages

35. 20 children were asked how many apples they ate each day. The results are recorded in a frequency table below.

a. Find the mean number of apples eaten per day.

No. of apples	Children	
0	4	
1	2	
2	4	
3	4	
4	6	
TOTAL		

b. What is the modal number of apples eaten

c. What is the range of apples eaten

d. What is the median number of apples eaten

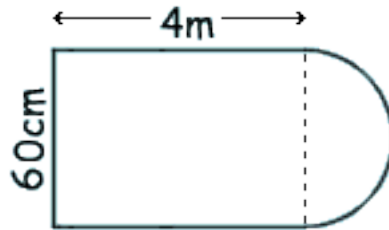
36. Top sets If 5 people have an average of 5 pets each and 10 people have an average of 2 pets each. What is the average number of pets in the whole group.

(Hint: you need to work out the totals)

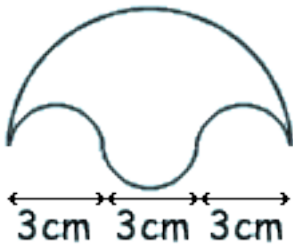
Circle questions

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

38. Find the area and perimeter of the following shapes



top sets only



Nets, volumes and surface area

39. A cuboid measures 8cm by 6cm by 10 cm.

- a. What is its volume?
- b. How many millilitres (ml) of water would fill the cuboid?
- c. What is its surface area?
- d. Draw the net of the cuboid
- e. Get some isometric (dotty) paper and try and draw the cuboid.