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)

Equipment you will need for the exam:

- Ruler (15cm and 30cm)
- Pencil
- Eraser and pencil sharpener
- Scientific Calculator (for Calculator Paper only)

TOPIC / PAPER	WHAT TO REVISE	DONE?

Non-calculator Paper	**Number Work**
	  ○ Negative numbers
	  ○ Multiplying by multiples of 10
	  ○ Sequences
	  ○ Decimal calculations
	  ○ Product of primes
	  ○ Worded real-life problems
	  ○ Fraction questions
	  ○ Decimals – fractions – percentages
	  ○ Percentages
	  ○ BIDMAS
	
	Algebra
	  ○ Substitution
	  ○ Solve equations
	  ○ Continuing patterns
	
	Shape and Data
	  ○ Angles in parallel lines, triangles, along a line and around a point (revision from last year)
	  ○ Averages – mean, mode, median and range (revision from last year)
	  ○ Interpreting pie charts (revision from last year)	

| Calculator Paper | **Language** Prime, multiple, factor, square, cube, triangular, odd, even etc. **Number** Rounding values to nearest 10, 100 etc. Percentages - increase and decrease Ratio (will be covered in lessons start of term) Fractions and decimals Worded fraction questions Reverse calculations Sequences and patterns of numbers **Algebra** Simplify **Shape and Data** Areas and perimeters (triangles and quadrilaterals) Volume (revision from last year) Speed / distance / time – converting between km per hour and metres per second (will be covered in lessons start of term) Averages – total of values from a mean Averages – tables and bar charts | |
| Maths Aural | 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:

- Revise by practising the questions below, using your note books and appropriate websites like www.mymaths.co.uk
- It should be assumed that any question with more than 1 mark requires at least 1 line of working. In the calculator paper this is often what you are about to type into your calculator. Workings should NOT be "doodle" like, the SHOULD be logical and clear.
- Most topics can come up in either or both papers; however, normally the topics listed above are on each paper
- On the Calculator Paper the topics are more "wordy" and require more problem solving
- For any further information or guidance about revision or the actual exam, please contact the Head of Maths – Mrs Barbara Langford (blangford@westbournehouse.org)

Practice Questions – Non-calculator Paper:

Number Work
Multiplying and dividing decimals by multiples of 10

1. 35 x 100
   6.7 ÷ 100
   convert 45.3 km to m
   convert 3.45 cm to mm

Decimal calculations

2. 4.56 x 6 =
   4.58 ÷ 4 =
   3.4 x 2.3 =
   45 ÷ 0.9 =

3. If I buy 6 calculators that cost £5.65 each, how much do I pay?

4. If 8 boxes of chocolates cost £12.72, how much does one box of chocolates cost?

5. Thirty-seven chairs fit in each row in a school hall. How many chairs would there be in 9 rows?

6. There are 31 cakes in a box and 4 chocolate drops on each cake. How many chocolate drops do I use for 45 boxes?

Negative numbers

7. $4 \times -5 =$
   $3 \times -6 =$
   $3 - -8 =$
   $3 - 8 =$
   $10 \div -2 =$

Prime numbers

8. Write 150 as a product of its prime (Hint: cherry tree)

Fractions

9. Find the value of the following
   $$\frac{3}{4} + \frac{1}{7}$$

   $$\frac{4}{5} \times \frac{7}{8}$$

   $$\frac{2}{5} \div \frac{7}{10}$$

10. I have a large jug of water. I use $\dfrac{2}{5}$ to make purple juice and $\dfrac{1}{3}$ to make orange juice.

- What fraction have I used altogether.
- What fraction do I have left?
- If I use half of what I have left to make pink juice. What fraction do I use?

Decimals – Fractions – Percentages

11. Place the following in order starting with the smallest

$$\dfrac{9}{20} \qquad 0.4 \qquad 42\% \qquad 0.044 \qquad 0.3467$$

12. Convert 0.35 to a fraction in its lowest form.

13. Convert 9% to a decimal

14. Convert $\dfrac{9}{25}$ a decimal

BIDMAS

15. Calculate the following:

$$4 - 5 + 9 =$$
$$2 + 3 \times 4 =$$
$$3 - 4^2 + 27 =$$
$$36 \div 3^2 + \sqrt{25} =$$

Algebra

16. If a = 3, b = − 4 and c = 5 substitute the values into the following expressions.

$$a + b + c =$$

$$2a^2 + b^2 =$$

$$a - b + c^2 =$$

$$2bc^2 =$$

$$(4a)^2 =$$

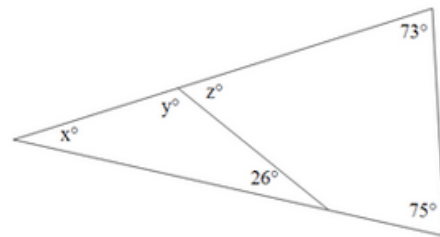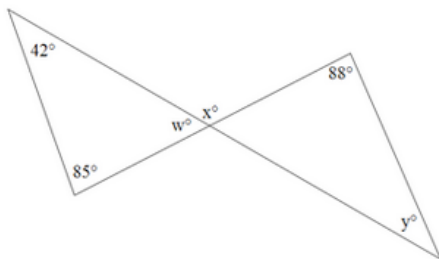17. Solve the following equations

$$3a = 9$$

$$3x + 6 = 18$$

$$4x + 5 = 2x - 17$$

$$3 - x = 3x - 13$$

Angles in triangles

18. Work out the missing angles

Patterns

22. Here is a set of patterns.

(i) Draw the 5th pattern

(ii) Complete the table

Number of triangles	Number of dots	Number of lines
1	3	3
2		5
3	5	
4		
5		

(iii) How many dots are there in the pattern with 12 triangles?

(iv) How many triangles are there in a pattern with 73 dots?

(v) How many triangles are there in a pattern with 121 lines?

Practice Questions – Calculator Paper:

Rounding

1. Round the following values to the places specified.

      191 (to the nearest 10)
      2345 (to the nearest 100)

Sequences

2. Continue the following sequence
          4, 7, 10, 13, 16, ..., ..., ...,

      Is the number 32 in the sequence? How do you know?

3. For the following sequence find the first non-zero term.

      55, 48, 41, 34, ……………

Percentages

4. An airline ticket is increased by 13%. It was £235, how much is it now?

5. A cost is reduced in the sale by 15%. It used to cost £95, how much is it now?

6. I buy a table for £373 and sell it for £421. What is my percentage profit?

7. After a reduction of 12% a box of rather delicious sweets cost £13.20. How much did they cost originally? (TOP SET ONLY)

Ratio

8. In a box of chocolates, there are 5 plain chocolates to every 3 milk chocolate one. There are 32 chocolates altogether. How many plain chocolates are there?

9. Turkey must be cooked for 46 minutes for every 0.5kg. For how long should a 3.5kg turkey be cooked?

10. If I need 200g of sugar for my special recipe for chocolate stars for 5 people, how much sugar do I need if I want to make chocolate stars for 11 people?

Algebra

11. Simplify the following algebraic expressions:

$3a + 4b - a + 6b =$
$3a \times 5b =$
$(3a)^2 =$
$4a^2 \times 6\,ab =$
$3a \div 6a =$

Wordy fractions

12. 3900 people attend an open-air concert. One quarter of them were adults, two thirds were boys and the rest were girls. How many girls attended?

13. My dog eats $\dfrac{7}{11}$ of a tin of dog food each day. How many tins will he need to last a fortnight?

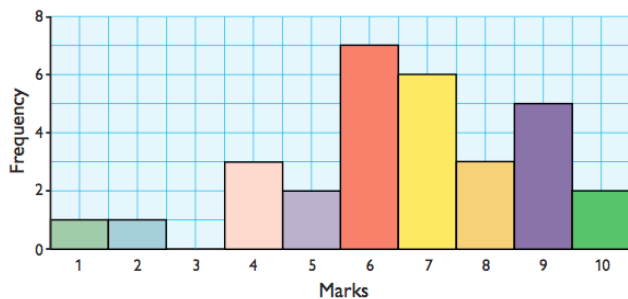## Area and Perimeter (triangles and quadrilaterals)

16. A square has an area of 81cm. Draw a sketch of another rectangle that has the same perimeter.

17. If a rectangle has a perimeter of 40cm, what is the area of the square with the same perimeter?

Averages and bar charts

18. The following graph shows marks gained in a tables test.

The graph shows marks gained in a tables test.

(a) What was the range of marks?
(b) What was the median mark?
(c) What was the modal mark?
(d) How many pupils took the test?
(e) What was the mean mark?

Pie charts

19. In a survey, some students were asked what their favourite leisure activity was. Their answers were used to draw this pie chart.
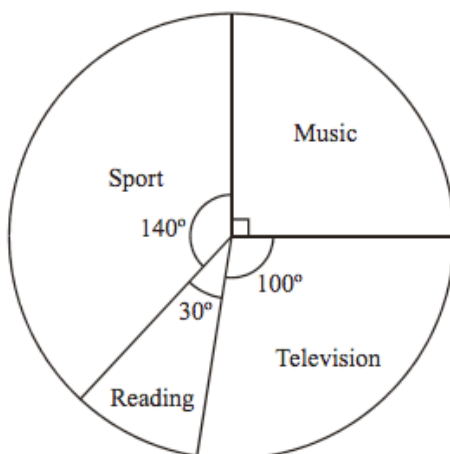
(i) What fraction of the students answered "television"? Simplify your answer.
(ii) 18 students answered "music". How many pupils took part in the survey?