

Maths Knowledge Organiser

YEAR 7– PART 2

Key Language

1	Approximate	To estimate a number, amount or total often using rounding of numbers to make them easier to calculate with.
2	Integer	A whole number that is positive or negative.
3	Median	A type of average. It is found by putting all the data values in order and finding the middle value of the list.
4	Negative	Any number less than zero; written with a minus sign.
5	Place Value	The value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right.
6	Range	The difference between the largest and smallest numbers in a set of data. It tells us how spread out a set of data is. If the range is large the numbers are more spread out.
7	Significant figure	A digit that gives meaning to a number. The most significant digit (figure) in an integer is the digit on the left. The most significant digit in a number less than one is the first non-zero number after the decimal point.
8	Fraction	How many parts of a whole we have.
9	Decimal	A number with a decimal point used to separate ones, tenths, hundredths etc.
10	Percentage	A proportion of a whole. It tells us how many out of 100. The symbol is %.
11	Recurring	A decimal that repeats in a given pattern. E.g. $0.\dot{6} = 0.666666666\dots$
12	Interval	The distance or amount between two points or values. E.g.. The interval between 3pm and 5pm is 2 hours.
13	Tenth	One whole split into 10 equal parts. It is written as $\frac{1}{10}$.
14	Hundredth	One whole split into 100 equal parts. It is written as $\frac{1}{100}$.
15	Sector	A part of a circle between two radii.
16	Coefficient	A number which multiplies a variable. E.g. in the term $5x$, 5 is the coefficient and x is the variable.
17	Difference	The gap between two terms or values. The values are subtracted.
18	Substitute	Replace a variable with a number or another variable.





More Useful Knowledge

1 million = 1 000 000

1 billion – 1 000 000 000

Comparing numbers

<	less than	Examples:	$3 < 5$	$2 + 9 < 20 - 2$
>	greater than	Examples:	$6.2 > 6.5$	$3 \times 5 > 2 \times 5$
=	equal to	Examples:	$2 + 3 = 5$	$3 \times 2 = 2 \times 3$
≠	not equal to	Examples:	$4 + 3 \neq 7$	$10 - 8 \neq 8 - 10$

Equivalent Decimals, Percentages and Fractions

Decimal	Percentage	Fraction
0.5	50%	$\frac{1}{2}$
0.25	25%	$\frac{1}{4}$
0.75	75%	$\frac{3}{4}$
0.2	20%	$\frac{1}{5}$
0.1	10%	$\frac{1}{10}$
$0.\dot{3}$	$33.\dot{3}\%$	$\frac{1}{3}$

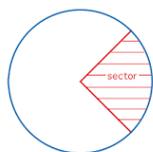


PRACTICE QUESTIONS

1. What is an integer?
2. Write 0.2 as a fraction?
3. Circle the correct statement. $2 > 9$ $4 > 3 + 1$ $10 - 2 > 7$
4. Write the number 1 billion using digits.
5. What is an interval?
6. What does it mean when the range is large?
7. How do you find the median?
8. Write $\frac{1}{3}$ as a decimal.
9. What symbol means 'not equal to'?
10. Describe a sector. Can you draw one?
11. Write 25% as a decimal.
12. What do we call a decimal that repeats in a pattern?
13. What word beginning with 'a' mean to estimate a number?
14. What is the value of the most significant figure in 3480?
15. What is the value of the most significant figure in 0.0792?
16. What is percentage measured out of?
17. Write $\frac{3}{4}$ as a percentage.
18. What is the interval between 2pm and 10pm?
19. What does one hundredth mean?
20. What is a negative number?
21. Write the correct symbol between these numbers $4 \quad ? \quad 7$
22. Which of these numbers are integers $2, -9, 1.2, -3.4, 80, 99$
23. What is $\frac{1}{5}$ as a percentage.
24. What is the difference between 2000 and 2200?
25. Substitute $x = 3$ into the expression $x + 10$

ANSWERS

1. A whole number that is positive or negative
2. $\frac{1}{5}$
3. $10 - 2 > 7$
4. 1 000 000 000
5. The distance or amount between two points or values.
6. The values are more spread out.
7. Order the values and find the middle value.
8. $0.\dot{3}$ (0.3333333.....)
9. \neq
10. A part of a circle between two radii



11. 0.25
12. Recurring
13. Approximate.
14. 3000 (3 thousand)
15. 7 hundredths.
16. 100
17. 75%
18. 8 hours
19. One whole split into 100 equal parts.
20. Any number less than zero; written with a minus sign.
21. $<$
22. 2, 80, 99
23. 20%
24. 200
25. 13

