Number

IGCSE Mathematics · Vocabulary in context

Word	Example
natural number /ˈnætʃərəl ˈnʌmbə/	1, 2 and 3 are each a **natural number**. 1、2 3
integer /ˈɪntɪdʒə/	An **integer** is a whole number, which can be positive, negative or zero.
factor /ˈfæktə/	3 is a **factor** of 12. 3 12
remainder /rɪˈmeɪndə/	14 divided by 5 leaves a **remainder** of 4. 14 5 4
multiple /ˈmʌltɪpl/	12 is a **multiple** of 3. 12 3
common factor /ˈkɒmən ˈfæktə/	2 is a **common factor** of 4 and 6. 2 4 6
common multiple /ˈkɒmən ˈmʌltɪpl/	12 is a **common multiple** of 4 and 6. 12 4 6
prime number /praɪm ˈnʌmbə/	7 is a **prime number**: its only factors are 1 and 7. 7 1 7
square number /skweə ˈnʌmbə/	16 is a **square number**. 16
cube number /kjuːb ˈnʌmbə/	27 is a **cube number**. 27
rational number /ˈræʃənl ˈnʌmbə/	3/4 is a **rational number**. 3/4
fraction /ˈfrækʃn/	1/2 is a **fraction**. 1/2
irrational number /ɪˈræʃənl ˈnʌmbə/	π is an **irrational number**. π
reciprocal /rɪˈsɪprəkl/	The **reciprocal** of 4 is 1/4. 4 1/4

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product /ˈprɒdʌkt/	The **product** of 3 and 4 is 12. 3 4 12
prime factor /praɪm ˈfæktə/	2 is a **prime factor** of 12. 2 12
highest common factor /ˈhaɪɪst ˈkɒmən ˈfæktə/	The **highest common factor** of 12 and 18 is 6. 12 18 6
lowest common multiple /ˈləʊɪst ˈkɒmən ˈmʌltɪpl/	The **lowest common multiple** of 4 and 6 is 12. 4 6 12
set /set/	A **set** holds values with no repeats.
element /ˈelɪmənt/	Each **element** of the array holds one value.
universal set /ˌjuːnɪˈvɜːsl set/	The **universal set** contains every item we are looking at.
complement /ˈkɒmplɪmənt/	The **complement** of A is everything not in A. A A
empty set /ˈempti set/	The **empty set** has nothing in it.
subset /ˈsʌbset/	{1, 2} is a **subset** of {1, 2, 3}. {1, 2} {1, 2, 3}
union /ˈjuːnɪən/	The **union** of two sets contains every item in either set.
intersection /ˌɪntəˈsekʃn/	The **intersection** of two sets contains items in both.
Venn diagram /ven ˈdaɪəgræm/	A **Venn diagram** shows events as circles that may overlap.
power /ˈpaʊə/	2 to the **power** 3 is 8. 2 3 8
index /ˈɪndeks/	In 2^3, the **index** is 3. 2^3 3

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square root /skweə ruːt/	The **square root** of 25 is 5. 25 5
cube root /kjuːb ruːt/	The **cube root** of 8 is 2. 8 2
base /beɪs/	In $\log_2 8 = 3$, the **base** is 2. $\log_2 8 = 3$ 2
standard form /ˈstændəd fɔːm/	3×10^4 is in **standard form**. 3×10^4
surd /sɜːd/	A **surd** such as $\sqrt{5}$ is a root that cannot be simplified to a whole number. $\sqrt{5}$
rationalise the denominator /ˈræʃənəlaɪz ðə dɪˈnɒmɪneɪtə/	To **rationalise the denominator** of $1/\sqrt{3}$, multiply the top and bottom by $\sqrt{3}$. $1/\sqrt{3}$ $\sqrt{3}$。
denominator /dɪˈnɒmɪneɪtə/	The **denominator** is the bottom of a fraction.
numerator /ˈnjuːməreɪtə/	The **numerator** is the top of a fraction.
proper fraction /ˈprɒpə ˈfrækʃn/	3/4 is a **proper fraction**. 3/4
improper fraction /ɪmˈprɒpə ˈfrækʃn/	7/4 is an **improper fraction**. 7/4
mixed number /mɪkst ˈnʌmbə/	$1\frac{3}{4}$ is a **mixed number**. $1\frac{3}{4}$
decimal /ˈdesɪml/	0.5 is a **decimal**. 0.5
percentage /pəˈsentɪdʒ/	Prices rose by five **percentage** points this year.
simplest form /ˈsɪmpəlɪst fɔːm/	6/8 in **simplest form** is 3/4. 6/8 3/4

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Word	Example
recurring decimal /rɪˈkɜːrɪŋ ˈdesɪml/	$1/3 = 0.333\ldots$ is a **recurring decimal**. $1/3 = 0.333\ldots$
order of operations /ˈɔːdə ɒv ˌɒpəˈreɪʃnz/	The **order of operations** says multiply before you add.
magnitude /ˈmægnɪtjuːd/	The force has a **magnitude** of 20 N. 20 N
multiplier /ˌmʌltɪˈplaɪə/	To increase an amount by 5%, use the **multiplier** 1.05. 5% 1.05
cost price	The shop paid a **cost price** of $20 for the shirt. $20
selling price /ˈselɪŋ praɪs/	It sold the shirt at a **selling price** of $30. $30
profit /ˈprɒfɪt/	If sales are bigger than costs, the firm makes a **profit**.
loss /lɒs/	A firm makes a **loss** when total costs exceed total revenue.
interest /ˈɪntrest/	Banks pay **interest** on savings.
principal /ˈprɪnsɪpl/	The **principal** is the money you first put in the bank.
simple interest /ˈsɪmpl ˈɪntrest/	**Simple interest** is paid only on the original amount.
compound interest /ˈkɒmpaʊnd ˈɪntrest/	**Compound interest** is paid on the interest too.
reverse percentage /rɪˈvɜːs pəˈsentɪdʒ/	A **reverse percentage** finds the price before a discount.
exponential growth /ˌekspəˈnenʃl grəʊθ/	A population that doubles every year shows **exponential growth**.

Word	Example
exponential decay /ˌekspəˈnenʃl dɪˈkeɪ/	The charge falls by **exponential decay**.
depreciation /dɪˌpriːʃɪˈeɪʃn/	The car's **depreciation** is 10% each year. 10%
ratio /ˈreɪʃiəʊ/	The **ratio** of boys to girls is 2 : 3. 2 : 3
proportion /prəˈpɔːʃn/	Draw each part in the right **proportion**.
scale /skeɪl/	The map's **scale** is 1 : 50 000. 1 : 50 000
rate /reɪt/	The success **rate** compares good attempts with all attempts.
average speed /ˈævrɪdʒ spiːd/	**Average speed** is total distance divided by total time.
density /ˈdensɪti/	Iron has a higher **density** than wood, so it sinks in water.
mass /mæs/	The **mass** of this bag of rice is 5 kg. 5 kg
volume /ˈvɒljuːm/	The **volume** of the box is $2\text{ m} \times 1\text{ m} \times 1\text{ m} = 2\text{ m}^3$. $2\text{ m} \times 1\text{ m} \times 1\text{ m} = 2\text{ m}^3$
population density /ˌpɒpjʊˈleɪʃn ˈdensɪti/	**Population density** is people per square kilometre.
pressure /ˈpreʃə/	A sharp knife puts a large **pressure** on the bread.
decimal place /ˈdesɪml pleɪs/	Round 3.14159 to two **decimal place** values: 3.14. 3.14159 → 3.14
significant figure /sɪgˈnɪfɪkənt ˈfɪgə/	Round 4567 to one **significant figure**: 5000. 4567 → 5000

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Word	Example
estimate /ˈestɪmət/	**Estimate** the height of the door before you measure it.
lower bound /ˈləʊə baʊnd/	The **lower bound** of the array is 1. 1
upper bound /ˈʌpə baʊnd/	The **upper bound** of the array is 10. 10
area /ˈeərɪə/	The integral gives the **area** under the curve.
time zone /taɪm zəʊn/	London and Beijing are in different **time zone** areas.
exchange rate /eksˈtʃeɪndʒ reɪt/	The **exchange rate** is the price of one currency in another.