GCSE Mathematics Foundation Tier

Number · Algebra · Ratio, proportion and rates of change · Geometry & measures · Probability · Statistics

Here is pretty much all the Foundation Tier content you need to know on A3 sheet of paper, including all the formulae you are required to know for GCSE. An ✚ points to an illustrative example. The codes refer to the DfE subject content. This sheet is well-kept if on your desk, using it in your bag, make notes on it (sorry, don't take it into the examination)...

BIDMAS N3

...or BODMAS. Use the correct order of operations take care when using a calculator.
- Brackets
- Indices (or pOwers)
- Division and Multiplication
- Addition and Subtraction

Types of number N4

Integer: a "whole" number
Factors: the divisors of an integer
✚ Factors of 12 are 1, 2, 3, 4, 6, 12
Multiples: a "times table" for an integer (will continue indefinitely)
✚ Multiples of 12 are 12, 24, 36...
Prime number: an integer which has exactly two factors (1 and the number itself). Note 1 is not a prime number.

HCF, LCM N4

Highest Common Factor (HCF)
✚ Factors of 6 are 1, 2, 3, 6
Factors of 9 are 1, 3, 9
HCF of 6 and 9 is 3
Lowest Common Multiple (LCM)
✚ Multiples of 6 are 6, 12, 18, 24...
Multiples of 9 are 9, 18, 27, 36...
LCM of 6 and 9 is 18

Prime factors N4

Write a number as a product of its prime factors; use indices for repeated factors.
✚ $720 = 5 \times 3^2 \times 2^4$

Powers and roots N6, N7

Special indices for any value a
$a^0 = 1$
$a^{-n} = \frac{1}{a^n}$
✚ $3^{-2} = \frac{1}{3^2} = \frac{1}{9}$

Calculating with fractions N8

Adding or subtracting fractions: use a common denominator...
✚ $\frac{2}{5} + \frac{1}{3} = \frac{6}{15} + \frac{5}{15} = \frac{11}{15}$
Multiplying fractions: multiply numerators and denominators...
✚ $\frac{2}{5} \times \frac{1}{3} = \frac{2}{15}$
Dividing fractions: "flip" the second fraction, then multiply...
✚ $\frac{2}{5} \div \frac{1}{3} = \frac{2}{5} \times \frac{3}{1} = \frac{6}{5}$

Fractions, decimals N10

Fraction is numerator ÷ denominator
✚ $\frac{3}{8} = 3 \div 8 = 0.375$
Use place values to change decimals to fractions. Simplify where possible.
✚ $0.45 = \frac{45}{100} = \frac{9}{20}$
Learn the most frequently used ones:

$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{3}{4}$
0.5	0.25	0.1	0.2	0.75

Surds N8

Look for the biggest square number factor of the number.
✚ $\sqrt{20} = \sqrt{4} \times \sqrt{5} = 2\sqrt{5}$

Standard form N9

Standard form numbers are of the form $a \times 10^n$ where $1 \le a < 10$ and n is an integer.

Standard units N13

1 tonne = 1000 kilograms
1 kilogram = 1000 grams

1 kilometre = 1000 metres
1 metre = 100 centimetres
= 1000 millimetres
1 centimetre = 10 millimetres

1 day = 24 hours
1 hour = 60 minutes = 3600 seconds
1 minute = 60 seconds

Rounding N15

Truncate the number, then use a "decider digit" to round up or down.
Decimal places: use the decimal point
✚ 342.3681 to 2dp
342.36|81 = 342.37 to 2dp
Significant figures: use the first non-zero digit.
✚ 342.3681 to 2sf
34|2.3681 = 340 to 2sf
✚ 0.007 079 to 2sf
0.0070|79 = 0.0071 to 2sf

Error intervals N15

Find the range of numbers that will round to a given value.
✚ $x = 5.83$ (2 decimal places)
$5.825 \le x < 5.835$
✚ $y = 44$ (2 significant figures)
$43.5 \le y < 44.5$
Note use of ≤ and <, and that the last significant figure of each is 5.

Algebraic notation A1

$ab = a \times b$
$3y = y + y + y$
$a^2 = a \times a$
$a^3 = a \times a \times a$
$a^2b = a \times a \times b$
$\frac{a}{b} = a \div b$

Equations and identities A3

An equation is true for some particular value of x
✚ $2x + 1 = 7$ is true if $x = 3$
...but an identity is true for every value of x
✚ $(x + a)^2 = x^2 + 2ax + a^2$
(note the use of the symbol ≡)

Laws of indices A4

For any value a
$a^m \times a^n = a^{m+n}$
$\frac{a^m}{a^n} = a^{m-n}$
$(a^m)^n = a^{mn}$
✚ $\left(\frac{2a^2b}{a^3}\right)^2 = ...$

Standard graphs A12

y = mx + c A9

Equation of straight line $y = mx + c$
m is the gradient, c is the y intercept
✚ Find the equation of the line that joins (0, 3) to (2, 13)
Find its gradient...
$\frac{13 - 3}{2 - 0} = \frac{10}{2} = 5$
...and its y intercept...
Passes through (0, 3), so $c = 3$
Equation is $y = 5x + 3$

Parallel lines: gradients are equal
✚ $y = 2x + 3$ and $y = 2x - 5$ both have gradient 2 so are parallel.

Expanding brackets A4

$a(b + c) = ab + ac$
✚ $5(2x - 3y) = 10x - 15y$
$(x + a)(x + b) = x^2 + ax + bx + ab$
✚ $(2x - 3)(x + 5)$
$= 2x^2 - 3x + 10x - 15$
$= 2x^2 + 7x - 15$
Reverse of expanding is factorising: putting an expression into brackets.

Quadratics A18

Solve a quadratic by factorising
✚ Solve $x^2 - 8x + 15 = 0$
Put into brackets (taking care with any negative numbers)...
$(x - 3)(x - 5) = 0$
...then either $x - 3 = 0$ or $x - 5 = 0$
so that $x = 3$ or $x = 5$.

Difference of two squares A4

$a^2 - b^2 = (a + b)(a - b)$
✚ $x^2 - 25 = (x + 5)(x - 5)$

Simultaneous equations A19

✚ Solve $\begin{cases} 2x + 3y = 13 \\ 5x - 3y = 1 \end{cases}$
Multiply to match a term in x or y
$\begin{cases} 10x + 15y = 65 \\ 10x - 6y = 2 \end{cases}$
Add or subtract to cancel...
$21y = 63$, so $y = 3$
Finally, substitute and solve...
$2 \times x + 3 \times 3 = 13$, so $x = 2$

Rearrange a formula A5

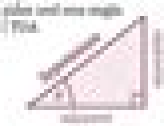
The subject of a formula is the term on its own. Use rules that "balance" the formula to change its subject
✚ Make x the subject of
$2x + 3y = z$
Here, subtract 3y from both sides...
$2x = z - 3y$
...then divide both sides by 2
$x = \frac{z - 3y}{2}$

Right angled triangles G20, G21

Pythagoras Theorem
Links all three sides.
No angles.
$a^2 + b^2 = c^2$

The longest side of any right angled triangle is the hypotenuse; check that your answer is consistent with this.

Trigonometry
Links two sides and one angle
SOH CAH TOA



$\sin\theta = \frac{opp}{hyp}$ $\cos\theta = \frac{adj}{hyp}$ $\tan\theta = \frac{opp}{adj}$

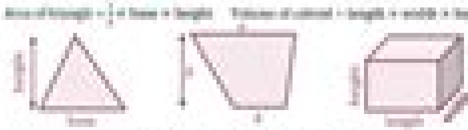
Use "2ndF" or "SHIFT" key to find a missing angle

Special values of sin, cos, tan
Learn (or be able to find without a calculator)...

θ°	sin θ°	cos θ°	tan θ°
0	0	1	0
30	$\frac{1}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{3}}$
45	$\frac{1}{\sqrt{2}}$	$\frac{1}{\sqrt{2}}$	1
60	$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	$\sqrt{3}$
90	1	0	

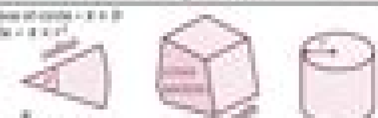
Area and volumes G16, G17, G18, G23

Area of triangle $= \frac{1}{2} \times$ base $\times$ height
Volume of cuboid = length × width × height



Area of trapezium $= \frac{1}{2}(a + b) \times h$

Circumference of circle $= \pi \times D$
Area of circle $= \pi \times r^2$



Arc length $= \frac{\theta}{360} \times \pi \times D$
Volume of cylinder $= \pi r^2 \times$ height
Area of sector $= \frac{\theta}{360} \times \pi \times r^2$
Volume of prism = area of cross section × length

Transformations G7, G8

Reflection
- Line of reflection

Translation
- Vector

Rotation
- Centre of rotation
- Angle of rotation
- Clockwise or anticlockwise

Enlargement
- Centre of enlargement
- Scale factor (if SF < 1 the shape will get smaller)

Angle facts G3

Exact angles in parallel lines: always use correct terminology...
Angles on a straight line total 180°
Angles in a full turn total 360°
Interior angles in a triangle total 180°
Use this for the interior angles of any polygon...
Exterior angles always total 360°

...or 180° × (n − 2)

Sequences A24, A25

Triangular numbers

1st	2nd	3rd	4th	5th
1	3	6	10	15

Square numbers ($n^2 = n \times n$)

1^2	2^2	3^2	4^2	5^2
1	4	9	16	25

Cube numbers ($n^3 = n \times n \times n$)

1^3	2^3	3^3	4^3	5^3
1	8	27	64	125

nth term of an arithmetic (linear) sequence is $an + d$
✚ nth term of 5, 8, 11, 14, ... is $3n + 2$ (always increased by 3, first term is $3 \times 1 + 2 = 5$)
Geometric sequence: multiply each term by a constant ratio
✚ 3, 6, 12, 24, ... (ratio is 2)
Fibonacci sequence: make the next term by adding the previous two...
✚ 1, 1, 2, 3, 5, 8, 13, 21, ...

Probability P3, P4

$p = \frac{\text{number of favourable outcomes}}{\text{number of possible outcomes}}$

$p = 0$	impossible
$0 < p < 0.5$	unlikely
$p = 0.5$	evens
$0.5 < p < 1$	likely
$p = 1$	certain

Probability rules P8, P9

Multiply for independent events
✚ P(5 on dice and H on coin)
$\frac{1}{6} \times \frac{1}{2} = \frac{1}{12}$
Add for mutually exclusive events
✚ P(5 or 6 on dice)
$\frac{1}{6} + \frac{1}{6} = \frac{2}{6}$
Apply these rules to tree diagrams

Parts of a circle G9

Division using ratio R5

Use a ratio for unequal sharing
✚ Divide £400 in the ratio 7 : 3
$7 + 3 = 10$, then £400 ÷ 10 = £40
$7 \times £40 = £280$, $3 \times £40 = £120$
(check: £280 + £120 = £400 ✓)

Ratio and fractions R8

Link between ratio and fractions
✚ Boys to girls in ratio 2 : 3
$\frac{2}{5}$ are boys, $\frac{3}{5}$ are girls.

Percentages R9

p percent of $x = \frac{p}{100} \times x$
✚ Increase £150 by 20%
$\frac{20}{100} \times £150 = £15.00$
£150 + £15.00 = £165.00
p as a percentage of $x = \frac{p}{x} \times 100\%$
✚ The population of a town increases from 3300 to 3630. Find the percentage increase.
$\frac{330}{3300} \times 100\% = 10\%$
Note: fraction $= \frac{\text{increase}}{\text{original}}$
Learn the most frequently used ones:

$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{100}$
50%	25%	10%	20%	1%

Speed, distance, time R11

Speed $= \frac{\text{distance}}{\text{time}}$
✚ A car travels 90 miles in 1 hour 30 minutes. Find its average speed.
90 miles ÷ 1.5 hours = 60 mph

Averages S4

Mode: most frequently occurring
Median: put the data in numerical order, then choose the middle one
Mean $= \frac{\text{total of items of data}}{\text{number of items of data}}$

Correlation S6

Positive correlation
Negative correlation

Pixl Maths Paper June 2answer

Daniel F McAuley

Pixl Maths Paper June 2answer:

Enjoying the Track of Expression: An Emotional Symphony within **Pixl Maths Paper June 2answer**

In a world eaten by monitors and the ceaseless chatter of immediate transmission, the melodic elegance and emotional symphony produced by the written term frequently fade in to the back ground, eclipsed by the relentless sound and disruptions that permeate our lives. However, set within the pages of **Pixl Maths Paper June 2answer** a stunning fictional treasure full of raw thoughts, lies an immersive symphony waiting to be embraced. Crafted by an elegant musician of language, that charming masterpiece conducts readers on a mental journey, skillfully unraveling the concealed tunes and profound affect resonating within each cautiously constructed phrase. Within the depths with this touching analysis, we can examine the book is central harmonies, analyze its enthralling writing style, and submit ourselves to the profound resonance that echoes in the depths of readers souls.

https://crm.avenza.com/data/Resources/default.aspx/Seat%20Belt%20Retractor%20Repair.pdf

Table of Contents Pixl Maths Paper June 2answer

Pixl Maths Paper June 2answer Introduction

In this digital age, the convenience of accessing information at our fingertips has become a necessity. Whether its research papers, eBooks, or user manuals, PDF files have become the preferred format for sharing and reading documents. However, the cost associated with purchasing PDF files can sometimes be a barrier for many individuals and organizations. Thankfully, there are numerous websites and platforms that allow users to download free PDF files legally. In this article, we will explore some of the best platforms to download free PDFs. One of the most popular platforms to download free PDF files is Project Gutenberg. This online library offers over 60,000 free eBooks that are in the public domain. From classic literature to historical documents, Project Gutenberg provides a wide range of PDF files that can be downloaded and enjoyed on various devices. The website is user-friendly and allows users to search for specific titles or browse through different categories. Another reliable platform for downloading Pixl Maths Paper June 2answer free PDF files is Open Library. With its vast collection of over 1 million eBooks, Open Library has something for every reader. The website offers a seamless experience by providing options to borrow or download PDF files. Users simply need to create a free account to access this treasure trove of knowledge. Open Library also allows users to contribute by uploading and sharing their own PDF files, making it a collaborative platform for book enthusiasts. For those interested in academic resources, there are websites dedicated to providing free PDFs of research papers and scientific articles. One such website is Academia.edu, which allows researchers and scholars to share their work with a global audience. Users can download PDF files of research papers, theses, and dissertations covering a wide range of subjects. Academia.edu also provides a platform for discussions and networking within the academic community. When it comes to downloading Pixl Maths Paper June 2answer free PDF files of magazines, brochures, and catalogs, Issuu is a popular choice. This digital publishing platform hosts a vast collection of publications from around the world. Users can search for specific titles or explore various categories and genres. Issuu offers a seamless reading experience with its user-friendly interface and allows users to download PDF files for offline reading. Apart from dedicated platforms, search engines also play a crucial role in finding free PDF files. Google, for instance, has an advanced

search feature that allows users to filter results by file type. By specifying the file type as "PDF," users can find websites that offer free PDF downloads on a specific topic. While downloading Pixl Maths Paper June 2answer free PDF files is convenient, its important to note that copyright laws must be respected. Always ensure that the PDF files you download are legally available for free. Many authors and publishers voluntarily provide free PDF versions of their work, but its essential to be cautious and verify the authenticity of the source before downloading Pixl Maths Paper June 2answer. In conclusion, the internet offers numerous platforms and websites that allow users to download free PDF files legally. Whether its classic literature, research papers, or magazines, there is something for everyone. The platforms mentioned in this article, such as Project Gutenberg, Open Library, Academia.edu, and Issuu, provide access to a vast collection of PDF files. However, users should always be cautious and verify the legality of the source before downloading Pixl Maths Paper June 2answer any PDF files. With these platforms, the world of PDF downloads is just a click away.

FAQs About Pixl Maths Paper June 2answer Books

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Pixl Maths Paper June 2answer is one of the best book in our library for free trial. We provide copy of Pixl Maths Paper June 2answer in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Pixl Maths Paper June 2answer. Where to download Pixl Maths Paper June 2answer online for free? Are you looking for Pixl Maths Paper June 2answer PDF? This is definitely going to save you time and cash in something you should think about.

Find Pixl Maths Paper June 2answer :

seat belt retractor repair

sec 4 cc geometry parallel lines and angles
section 18 1 rates of reaction answer key
secondary solutions night literature teachers guide
secondary maths exam paper 2012
seattle times tv guide pa n
secondary 1 science revision guide
secant and tangent relationships bob hope school
secondry school maths help rs agarwal
~~secret keys on keyboard~~
~~section 1 reinforcement stars answers~~
seat ibiza 97 haynes manual
~~seat altea xl manual~~
section 1 guided reading and review parties in american history answers
section 17 1 atmosphere characteristics answer key

Pixl Maths Paper June 2answer :

Mosby's Pharmacology Memory NoteCards Mnemonics and other proven memory aids help you grasp and remember even the most complex concepts. UNIQUE! More than 100 colorful cartoons offer humorous and ... Mosby's Pharmacology Memory NoteCards: Visual, ... These durable, portable cards use mnemonics and other time-tested learning aids to help you prepare for class, clinicals, and the NCLEX® examination. Created by ... Mosby's Pharmacology Memory NoteCards - E-Book Mosby's Pharmacology Memory NoteCards - E-Book: Visual, Mnemonic, and Memory Aids for Nurses · eBook · $18.99 $24.99 Save 24% Current price is $18.99, Original ... Mosby's Pharmacology Memory NoteCards - 9780323661911 Mnemonics and other proven memory aids help you grasp and remember even the most complex concepts. UNIQUE! More than 100 colorful cartoons offer humorous and ... Mosby's Pharmacology Memory NoteCards 4th edition Mosby's Pharmacology Memory NoteCards: Visual, Mnemonic, and Memory Aids for Nurses 4th Edition is written by JoAnn Zerwekh, Jo Carol Claborn and published ... Mosby's Pharmacology Memory NoteCards, 6th Edition Mnemonics and other proven memory aids help you grasp and remember even the most complex concepts. UNIQUE! More than 100 colorful cartoons offer humorous and ... Mosbys Pharmacology Memory NoteCards: ... Using a wide variety of learning aids, humor, illustrations, and mnemonics, this valuable tool helps you master pharmacology in class, in clinicals, and in ... Mosby's Pharmacology Memory NoteCards: 7th edition Bring your pharmacology review to life with more than 100 colorful flashcards! Mosby's Pharmacology Memory

NoteCards: Visual, Mnemonic, & Memory Aids for Nurses ... Visual, Mnemonic, & Memory Aids for Nurses Mosby's Pharmacology Memory NoteCards: Visual, Mnemonic, & Memory Aids for Nurses ... Nurses, 4th Edition uses humor and illustrations to make studying easier ... visual, mnemonic, and memory aids for nurses Mosby's pharmacology memory notecards : visual, mnemonic, and memory aids for nurses ... 4th Edition uses humor and illustrations to make studying easier and ... Pelobatoidea The Pelobatoidea are a superfamily of frogs. They typically combine a toad-like body shape with a frog-like, pointed face Phylogenetically they stand ... European spadefoot toad The European spadefoot toads are a family of frogs, the Pelobatidae, with only one extant genus Pelobates, containing six species. They are native to Europe ... Pelobatidae They are collectively known as the "spadefoot toads" due to the presence of a keratinized "spade" on each hind foot which are used in burrowing. While all ... European Spadefoot Toads (Family Pelobatidae) The European spadefoot toads are a family of frogs, the Pelobatidae, with only one extant genus Pelobates, containing four species. ADW: Pelobatidae: INFORMATION Pelobatids are squat and toadlike, with soft skins and fossorial habits. This treatment places Megophryidae in a separate family, leaving but two or three ... Spadefoot Toads (Pelobatidae) Frogs in this family are often mistaken for toads (exemplified by the common name, "spadefoot toads"). They do not have the warty skin of true toads, however, ... Natural History of the White-Inyo Range Spadefoot Toads (Family Pelobatidae). Great Basin Spadefoot Toad,Spea ... A related species in southeastern California, the Couch's Spadefoot Toad (S. couchii) ... Couch's spadefoot (Scaphiopus couchi) Couch's spadefoot (Scaphiopus couchi). Order: Salientia Family: Pelobatidae (spadefoots) Other common name: spadefoot toad. Spanish names: sapo con espuelas ... Spadefoot toad | burrowing, nocturnal, desert 3 days ago — All spadefoot toads are classified in the family Pelobatidae. Spadefoot toads have a broad, horny “spade” projecting from the inside of each Pelobatidae - European Spadefoot Toad Family - Apr 21, 2017 — The family Pelobatidae is the European Spadefoot toads but they aren't just found in Europe, they are also found in Asia and Northern Africa. Aston Martin Owner's Guides Access your Aston Martin Owner's Guide using the search function below. ... Select your model and model year. Model *. Select model, Cygnet, DB11, DB9, DB9 Bond ... The Aston Martin Cygnet Is the Most Ridiculous Exotic Car Ever Aston Martin Cygnet Review - Drive.com.au Oct 30, 2011 — Aston Martin Cygnet 1.33-litre four-cylinder dual VVT-i petrol engine, six-speed manual with Stop & Start technology, 72kW/125Nm. Aston Martin ... Cygnet (High Line) Although Dr Bez, Aston Martin CEO would have liked to have seen electric Cygnets ... Aston Martin Review, the definitive guide to Gaydon era cars. http://www ... Aston Martin Cygnet | City Car The Aston Martin Cygnet was designed as a solution to urban mobility. Find out more about this city car, an elegant extension to the iconic range of sports ... Aston Martin Cygnet V8 Driving, Engines & Performance May 24, 2021 — Admittedly, the seven-speed automated manual was never the Vantage's strong point, but as the V8 Cygnet isn't a fully developed production car, ... Reviews | Aston Martin Cygnet Reviews of the Aston Martin Cygnet - good or bad or just mean. Aston Martin Cygnet V8 | UK Review Aug 12, 2018 — Short of a Nissan Cube with a GT-R powertrain (the mind

boggles), it really is hard to imagine a more ridiculous, yet perversely appealing, ... Aston Martin Cygnet (2011 - 2013) used car review Dec 13, 2013 — One of the benefits of Cygnet ownership is access to the vast palette of paint and materials finishes enjoyed by buyers of more traditional ... Aston Martin Cygnet review: “like a Toyota MR2 ... Apr 24, 2018 — The idea was to create a luxurious city car to offer exclusively to existing Aston owners. The reality, launched in 2011, was a badge-engineered ...