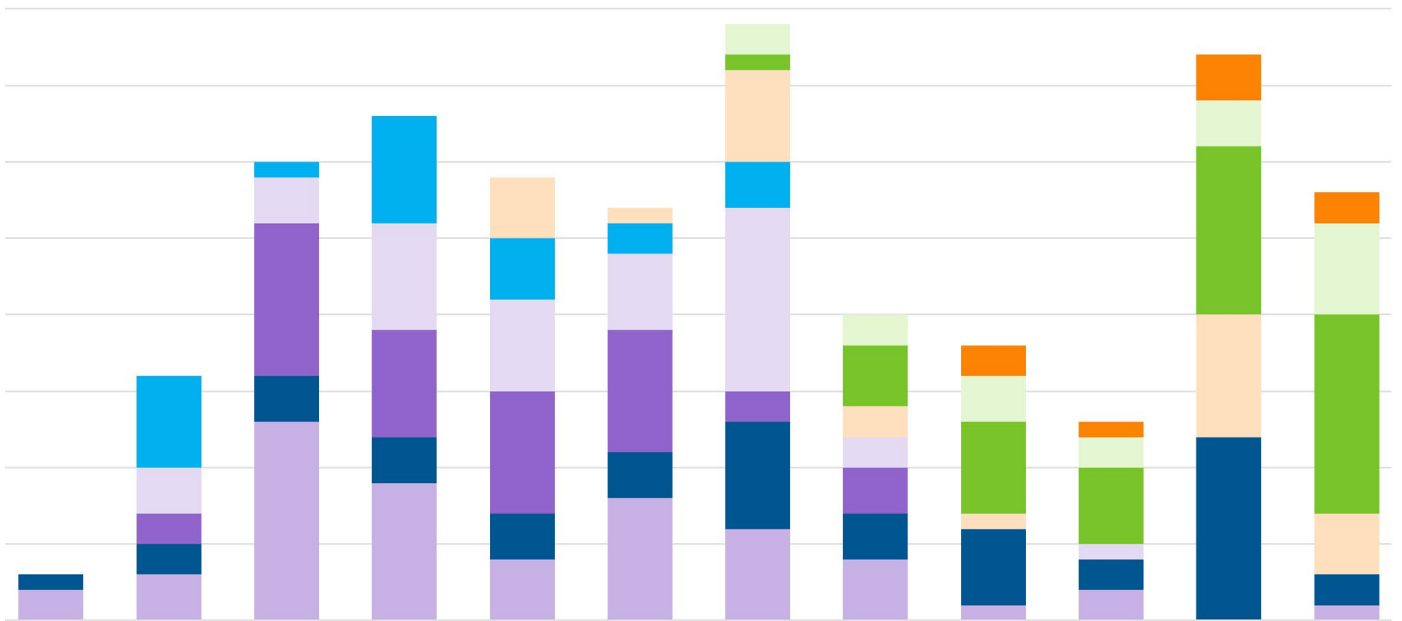


Maths Focus Skills™

based on the National Curriculum of England



Focus Skills: The key building blocks for understanding

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Introduction

In 2014, the Department for Education adopted the current National Curriculum. The associated documents outlined the related programmes of study and attainment targets that detail what pupils should know and be able to do at any given year level. These are the “blueprints” that guide instruction, curriculum, and assessment. However, not all attainment targets are created equal. Some are foundational to that year level and required for learning skills yet to come; other targets may represent the introduction of ideas to be expanded in later years or extensions of existing skills that were taught earlier.

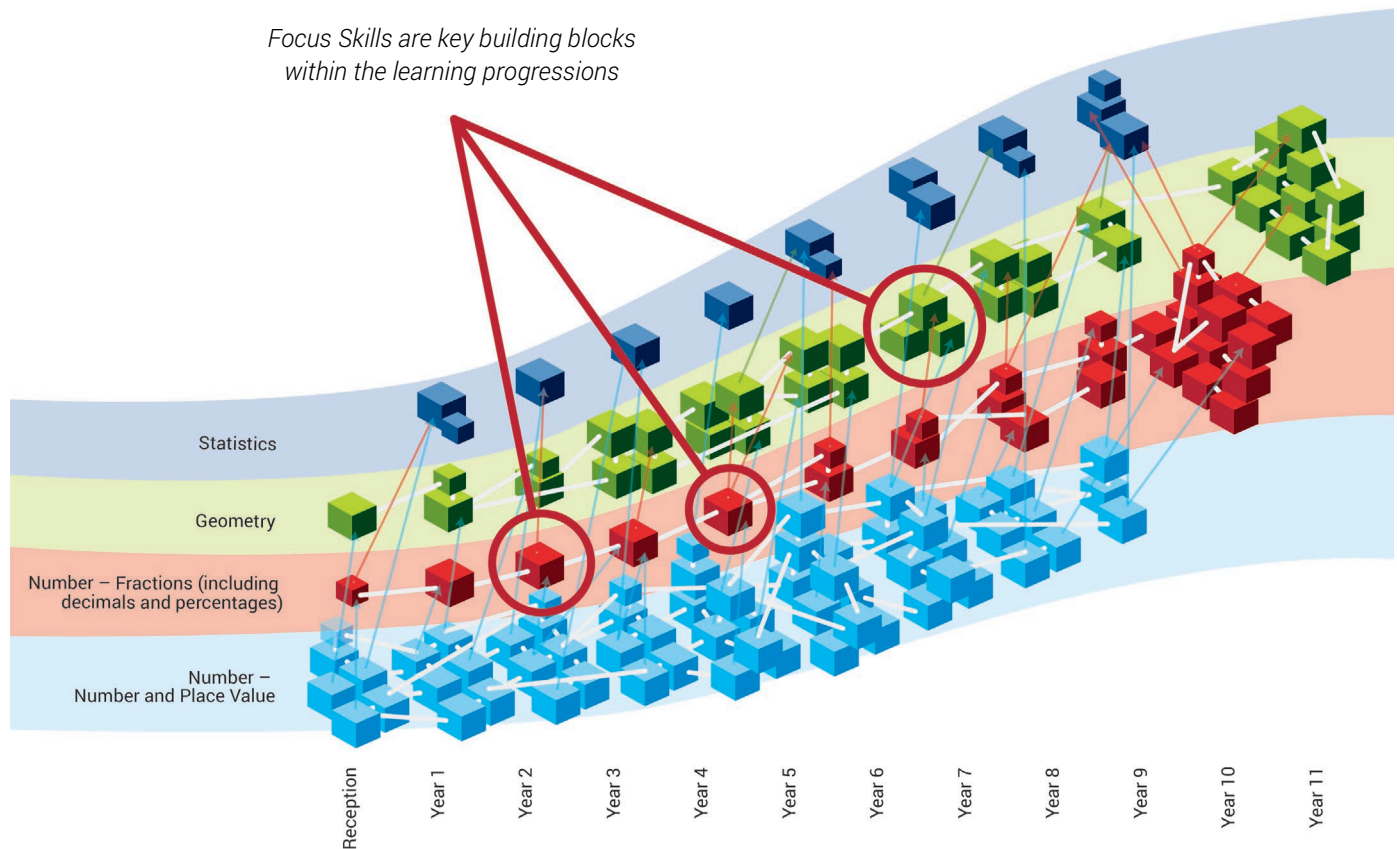
In this document, Renaissance present the **Focus Skills™** of each year. They are the foundational skills that are essential to advancing learning (i.e., concepts learners must master along the way in order to move to the next step), supporting the development of future skills (i.e., serve as strong prerequisites for skills to come), and/or reflecting the emphasis of the National Curriculum at that year level.

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Development of Maths Focus Skills

Focus Skills stem from more than a decade of Renaissance’s work on developing and validating learning progressions. **Learning progressions describe the incremental way students acquire knowledge—from lesser to more sophisticated understanding—within a subject area.** Building new knowledge relies on developing understanding of prerequisite skills.



Renaissance contracted with the National Foundation for Educational Research (NFER) to develop a detailed learning progression based on the National Curriculum. This began by developing an underlying framework or hierarchy of domains and sub-domains to accurately reflect the structure and organisation of the curriculum. Work then turned to identifying the discrete, teachable skill statements necessary to support each element of the curriculum. Finally, specific attention was given to ordering the skills within and across year levels, based on how students would typically be expected to learn them (with successive complexity and sophistication). Not only was the order of skills in our learning progressions based on expert review and classroom experience, it was also validated by data from millions of student responses and more than 5,600 test questions.

Experts also identified a subset of the skills as **Focus Skills, meaning those that represent the key building blocks for understanding.** These skills require a specific level of competency and provide the foundation for next levels of learning. For example, in Year 4, the ability to “recognise the place value of each digit in a four-digit positive integer” is a Focus Skill while being able to “Read Roman numerals 1 to 100” is not. The rationale for this is that understanding place value is foundational to mastering arithmetic and becoming numerically competent. Using Roman numerals is important in certain contexts, but not essential for progressing in mathematics.

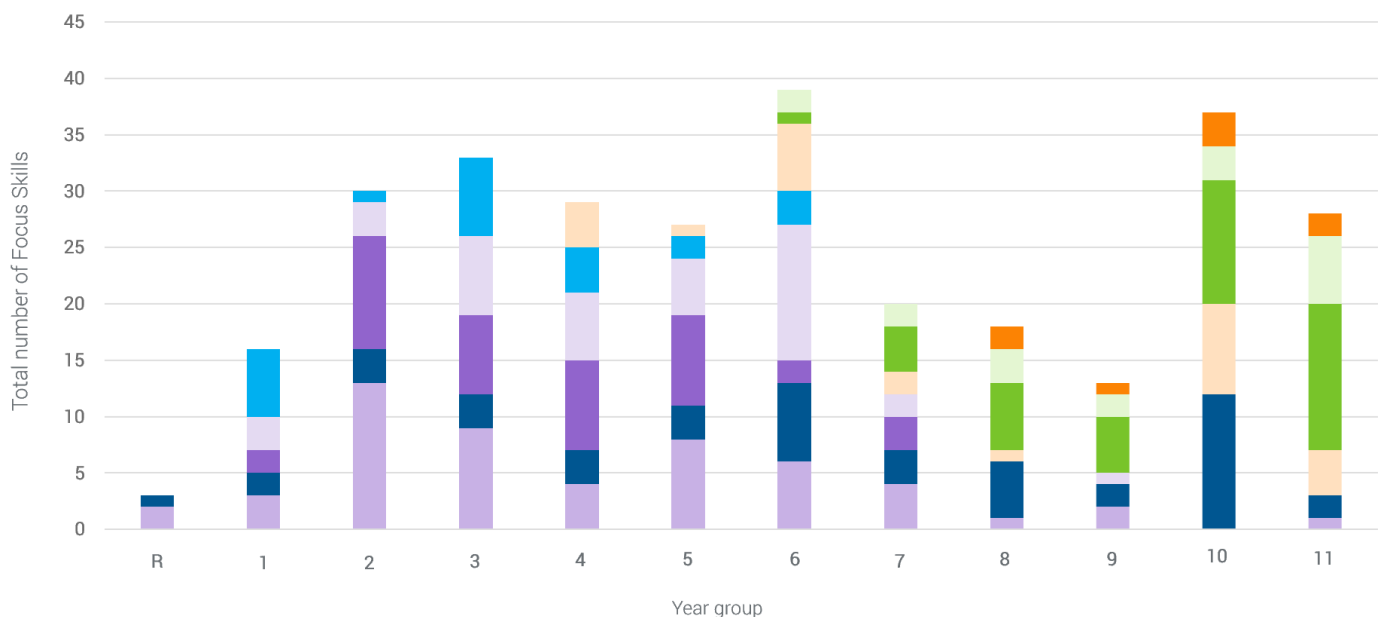
It is not that other skills do not have value; rather, it is that some skills are more critical as building blocks and necessary foundations for future learning. **Focus Skills are the most essential skills from each domain,** and they are also ordered based on how most pupils would be expected to learn them.

National curriculum domains and associated years

Domain	R	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
Number - Number and Place Value	[Purple]											
Number – Arithmetic Operations	[Light Purple]											
Number – Fractions (including decimals and percentages)		[Light Purple]										
Ratio, proportion, and rates of change							[Light Green]					
Algebra							[Green]					
Measurement		[Blue]										
Geometry	[Dark Blue]											
Probability								[Orange]				
Statistics			[Light Orange]									

The Focus Skills are linked to the domains and headings associated with the year-level attainment targets as shown above (and colour coded as such throughout the document for easy reference).

Focus Skills by the numbers



How to use this workbook

For years, multiple authors have argued that teachers have been given many more educational objectives than could ever be addressed (Schmoker, 2018; Lemov, Woolway, and Yezzi, 2012; Stiggins, 2017; Kohn, 1999). Focus Skills are designed to help. In a word, they are about prioritisation. Within the massive cloud of all possible skills, they identify those that are “considered to be essential in underpinning future learning” (Kirkup et al., 2014). They resolve the dilemma that programmes of study often contain absolutely essential skills that are commingled with ones that are far more secondary in nature by clearly noting those that are non-negotiable skills.

This workbook contains a listing of all Focus Skills for maths based on the National Curriculum of England.

Grain Size

We should note that all skills in Renaissance’s various learning progressions are at the discrete, teachable level. Attainment targets, in contrast, often comprise multiple skills. These skills, therefore, represent the unpacking or deconstructing of the targets that are advanced by many authors (Kirkup et al., 2014; Stiggins, 2005; Stiggins, 2017).

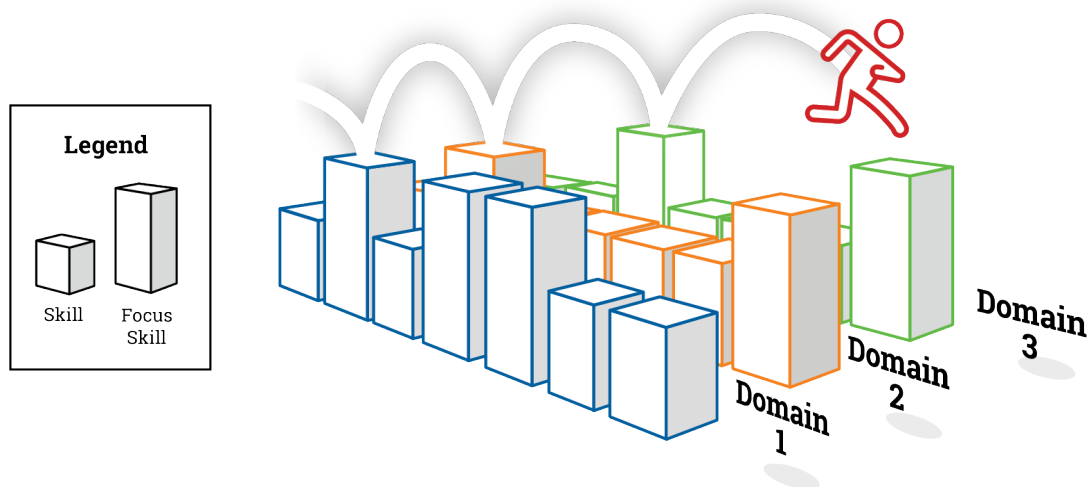
Headings

The “Yr.” heading indicates the year level (e.g. Year 5) associated with each skill. The “Domain Group” heading is drawn from the overall organisation of the National Curriculum and this field also includes coding referencing specific areas of and targets within the curriculum (e.g. Maths.KS2.Y5.NF.11) that documents the alignment between each Focus Skill and the National Curriculum. This coding can also be used by Star customers to search for skills within the Skills and Resources area of the Maths Dashboard. The “No.” heading stands for Number. The value in that column represents the position of each individual skill within the overall learning progression and is generally suggestive of difficulty. Finally, the “Focus Skill” heading offers the name of the skill with the full skill description being available in the “Description” heading.

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y5	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y5.NF.11	484	Write percentages in fraction or decimal form	Write percentages in fraction or decimal form	
Y5	Measurement and Data: Measurement: Maths.KS2.Y5.M.3	490	Find the perimeter: composite rectilinear shape	Calculate the perimeter of composite rectilinear shapes in centimetres and metres	
Y5	Measurement and Data: Measurement: Maths.KS2.Y5.M.2	499	Use approximations: metric / imperial units	Use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	
Y5	Statistics and Probability: Statistics: Maths.KS2.Y5.S.2	522	Complete information in tables	Complete information in tables	

Organisation

This information is organised based on feedback from multiple focus groups with teachers. Skills are sorted first by sub-domain (e.g. Geometry) and then by overall order (No.). The sub-domain level was selected as the primary driver because teachers generally plan instruction focused on specific topics/skills sets. In terms of the No. reference, a skill with 73 noted in the No. column is the 73rd skill in the overall progression.



Focus Skills are a subset of entire list of skills (usually 20-40%), and though they are ordered by domain, students need to integrate learning across domains to continue to make progress.

Also, readers will note that not all numbers appear within the “No.” heading. This is because Renaissance’s learning progressions include all skills, not just those that are noted as Focus Skills. These other skills are parts of the progressions built to reflect the National Curriculum, but they are not provided here. The complete skill list is available to Star customers within the software.

Ideas for use

Use information from this workbook to do the following:

- Choose skills for targeted instruction and check for mastery during regular instruction
- Identify high leverage pre-requisites for review if students are struggling
- Prioritise instruction on the most important skills when trying to close performance gaps

We would note that in these current circumstances multiple authors (Hill and Loeb, 2020; Sawchuk, 2020) suggest that, rather than spend substantial time reviewing, teachers should focus on “moving students immediately into grade-level-appropriate content in the new school year, rather than repeating material from the end of the prior grade,” but also acknowledge that “where new lessons draw on concepts affected by the shutdown, schools can add extra review but in a ‘just in time’ fashion” (Hill and Loeb, 2020, n.p.).

One final note – Be great at the most important things

While Focus Skills typically comprise anywhere from 20-40% of skills overall, depending on the subject, that does not mean we should allocate 20-40% of our time to them. We should allocate more. Fogarty, Kerns, and Pete (2018) call for essential skills to receive “disproportionate practice” (p. 95). Lemov, Woolway, and Yezzi note that “if you’re practicing one of those important skills—one of the [ones that most drive] performance—don’t stop when your [pupils] ‘know how to do it’” because “your goal with these . . . skills is excellence, not mere proficiency” (2012, p. 30). “Automaticity,” “and “fluency” are also terms that are relevant here. The goal, Lemov et al. note, “is to be great at the most important things” (p. 31).

Reception

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
R	Numbers and Operations: Number - arithmetic operations: Maths.R.EYFS ELG 11	10	Add two 1-digit numbers, quantities, counting on	Add two single-digit numbers using quantities by counting on	
R	Numbers and Operations: Number - arithmetic operations: Maths.R.EYFS ELG 11	12	Subtract two 1-digit numbers / quantities / count on	Subtract two single-digit numbers using quantities by counting on	
R	Geometry: Geometry: Maths.R.EYFS ELG 12	15	Recognise and describe patterns	Recognise and describe patterns	

Year 1

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y1	Numbers and Operations: Number - number and place value: Maths.KS1.Y1.NPV.1	37	Count to/across 100, begin with 0, 1, any number	Count to and across 100 forwards, beginning with 0 or 1, or from any given number	
Y1	Numbers and Operations: Number - number and place value: Maths.KS1.Y1.NPV.2	40	Read whole numbers to 100 in numerals	Read whole numbers to 100 in numerals	
Y1	Numbers and Operations: Number - number and place value: Maths.KS1.Y1.NPV.2	41	Write whole numbers to 100 in numerals	Write whole numbers to 100 in numerals	
Y1	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y1.NAS.1	27	Write mathematical statements with + / - / = signs	Write mathematical statements involving addition (+), subtraction (-) and equals (=) signs	
Y1	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y1.NAS.1	28	Interpret math statements with + / - / = signs	Interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	
Y1	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y1.NAS.4	47	Solve +/- problems phrased in a variety of ways	Solve addition and subtraction problems that are phrased in a variety of ways	
Y1	Geometry: Geometry: Maths.KS1.Y1.GPS.1.a	84	Recognise and name common 2-D shapes	Recognise and name common 2-D shapes	
Y1	Geometry: Geometry: Maths.KS1.Y1.GPS.1.b	85	Recognise and name common 3-D shapes	Recognise and name common 3-D shapes	
Y1	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS1.Y1.NF.1	56	Name a half as 1 of 2 equal parts of a quantity	Name a half as one of two equal parts of a quantity	
Y1	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS1.Y1.NF.2	62	Name quarter as 1 of 4 equal parts of a quantity	Name a quarter as one of four equal parts of a quantity	
Y1	Measurement and Data: Measurement: Maths.KS1.Y1.M.5	66	Use language relating to dates	Use language relating to dates	
Y1	Measurement and Data: Measurement: Maths.KS1.Y1.M.6	67	Use vocabulary of time / aware of duration of time	Begin to use vocabulary of time and to be aware of the duration of time	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y1	Measurement and Data: Measurement: Maths.KS1.Y1.M.2.d	70	Measure / record time (hours, minutes, seconds)	Measure and begin to record time (hours, minutes, seconds)	
Y1	Measurement and Data: Measurement: Maths.KS1.Y1.M.2.a	75	Measure and begin to record lengths and heights	Measure and begin to record lengths and heights	
Y1	Measurement and Data: Measurement: Maths.KS1.Y1.M.2.b	76	Measure and begin to record mass / weight	Measure and begin to record mass/weight	
Y1	Measurement and Data: Measurement: Maths.KS1.Y1.M.2.c	77	Measure and begin to record capacity and volume	Measure and begin to record capacity and volume	

Year 2

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y2	Numbers and Operations: Number - number and place value: Maths.KS1.Y2.NPV.5	88	Read whole numbers to at least 100 in words	Read whole numbers to at least 100 in words	
Y2	Numbers and Operations: Number - number and place value: Maths.KS1.Y2.NPV.5	89	Write whole numbers to at least 100 in words	Write whole numbers to at least 100 in words	
Y2	Numbers and Operations: Number - number and place value: Maths.KS1.Y2.NPV.1	90	Count on in steps of 2 from 0	Count on in steps of 2 from 0	
Y2	Numbers and Operations: Number - number and place value: Maths.KS1.Y2.NPV.1	93	Count on in steps of 3 from 0	Count on in steps of 3 from 0	
Y2	Numbers and Operations: Number - number and place value: Maths.KS1.Y2.NPV.1	95	Count on in steps of 5 from 0	Count on in steps of 5 from 0	
Y2	Numbers and Operations: Number - number and place value: Maths.KS1.Y2.NPV.1	97	Count on in whole tens from 0	Count on in whole tens from 0	
Y2	Numbers and Operations: Number - number and place value: Maths.KS1.Y2.NPV.1	99	Count on in tens from any number	Count on in tens from any number	
Y2	Numbers and Operations: Number - number and place value: Maths.KS1.Y2.NPV.1	100	Count back in tens from any number	Count back in tens from any number	
Y2	Numbers and Operations: Number - number and place value: Maths.KS1.Y2.NPV.2	101	Recognise place value: digit in a 2-digit number	Recognise the place value of each digit in a two-digit number	
Y2	Numbers and Operations: Number - number and place value: Maths.KS1.Y2.NPV.6	134	Problems, 1-/2-digit numbers: place value / facts	Use place value and number facts to solve problems with numbers up to two digits	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NAS.2	107	Add mentally addition facts to 20	Add fluently by mentally recalling addition facts to 20	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NAS.2	108	Subtract mentally addition facts to 20	Subtract fluently by mentally recalling subtraction facts to 20	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NAS.3.b	114	Add mentally a two-digit number and tens	Add mentally a two-digit number and tens	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NAS.3.b	115	Subtract mentally a two-digit number and tens	Subtract mentally a two-digit number and tens	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NAS.2	118	Derive / use: addition / subtraction facts up to 100	Derive and use addition and subtraction facts up to 100	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NAS.2	123	Mentally use (+) facts to 20: up to 3 numbers	Mentally use addition facts to 20 fluently, adding up to three numbers	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NAS.2	124	Mentally use (-) facts from 20: up to 3 numbers	Mentally use subtraction facts from 20 fluently, subtracting up to three numbers	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NAS.5	128	Recognise inverse relationship between + and -	Recognise the inverse relationship between addition and subtraction	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NMD.1	137	Multiply: recall the 2s multiplication table	Multiply by recalling multiplication facts for the 2 multiplication table	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NMD.1	139	Multiply: recall the 10s multiplication table	Multiply by recalling multiplication facts for the 10 multiplication table	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NMD.1	141	Multiply: recall the 5s multiplication table	Multiply by recalling multiplication facts for the 5 multiplication table	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NMD.2	143	Calculate multiplication within times tables	Calculate mathematical statements for multiplication within the multiplication tables	
Y2	Numbers and Operations: Number - arithmetic operations: Maths.KS1.Y2.NMD.2	144	Write multiplication statement: use math symbols	Write mathematical statements for multiplication within the multiplication tables using the multiplication (\times) and equals (=) signs	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y2	Geometry: Geometry: Maths.KS1.Y2.GPS.2	188	Identify / describe the properties of 3-D shapes	Identify and describe the properties of 3-D shapes	
Y2	Geometry: Geometry: Maths.KS1.Y2.GPS.4	191	Compare / sort attributes of everyday 3-D shapes	Compare and sort common 3-D shapes and everyday objects by comparing their attributes	
Y2	Geometry: Geometry: Maths.KS1.Y2.GPD.2	193	Describe position, direction and movement	Use mathematical vocabulary to describe position, direction and movement: 'right angle', 'quarter turn', 'half turn' and 'three-quarter turn'	
Y2	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS1.Y2.NF.1	157	Write $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$: length / shape / object	Write $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, and $\frac{3}{4}$ of a length, shape, set of objects or a quantity	
Y2	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS1.Y2.NF.2	158	Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	
Y2	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS1.Y2.NF.2	159	Write simple fractions	Write simple fractions	
Y2	Measurement and Data: Measurement: Maths.KS1.Y2.M.8	164	Know the number of minutes / hour, hours / day	Know the number of minutes in an hour and the number of hours in a day	

Year 3

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y3	Numbers and Operations: Number - number and place value: Maths.KS2.Y3.NPV.2	224	Recognise place value in a three-digit number	Recognise the place value of each digit in a three-digit positive integer	
Y3	Numbers and Operations: Number - number and place value: Maths.KS2.Y3.NPV.3	226	Order whole numbers up to 1000	Order whole numbers up to 1000	
Y3	Numbers and Operations: Number - number and place value: Maths.KS2.Y3.NPV.1	229	Count on from 0 to 1000 in multiples of 100	Count on from 0 to 1000 in multiples of 100	
Y3	Numbers and Operations: Number - number and place value: Maths.KS2.Y3.NPV.1	230	Count on from 0 in multiples of 50	Count on from 0 in multiples of 50	
Y3	Numbers and Operations: Number - number and place value: Maths.KS2.Y3.NPV.1	241	Count on from 0 in multiples of 4	Count on from 0 in multiples of 4	
Y3	Numbers and Operations: Number - number and place value: Maths.KS2.Y3.NPV.1	242	Count on from 0 in multiples of 8	Count on from 0 in multiples of 8	
Y3	Numbers and Operations: Number - number and place value: Maths.KS2.Y3.NPV.6	252	Solve problems with numbers up to three digits	Use place value and number facts to solve problems with numbers up to three digits	
Y3	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y3.NAS.1.c	235	Add mentally a three-digit number and hundreds	Add mentally a three-digit number and hundreds	
Y3	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y3.NAS.1.c	236	Subtract mentally a 3-digit number and hundreds	Subtract mentally a three-digit number and hundreds	
Y3	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y3.NMD.1	243	Recall/use the 3, 4, and 8 multiplication tables	Use mentally multiplication and division facts by recalling the 3, 4, and 8 multiplication tables	
Y3	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y3.NMD.2	247	Write / solve maths statements for multiplication	Write and calculate mathematical statements for multiplication using known multiplication tables	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y3	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y3.NAS.4	252	Solve problems with numbers up to three digits	Use place value and number facts to solve problems with numbers up to three digits	
Y3	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y3.NAS.4	254	Arithmetic strategies: numbers up to 1000	Solve problems with whole numbers up to 1000 using arithmetic strategies	
Y3	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y3.NAS.3	255	Estimate a sum or difference	Estimate the answer to a sum or difference calculation	
Y3	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y3.NMD.2	256	Use formal written methods to multiply	Use formal written methods to calculate mathematical statements for multiplication using known multiplication tables	
Y3	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y3.NAS.3	259	Use inverse operations to check answers	Use inverse operations to check answers to calculations	
Y3	Geometry: Geometry: Maths.KS2.Y3.GPS.1	260	Draw 2-D shapes	Draw 2-D shapes	
Y3	Geometry: Geometry: Maths.KS2.Y3.GPS.4	265	Identify perpendicular / parallel lines in shapes	Identify pairs of perpendicular and parallel lines within shapes	
Y3	Geometry: Geometry: Maths.KS2.Y3.GPS.3	267	Identify right angles	Identify right angles	
Y3	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y3.NF.3	278	Use non-unit fractions with small denominators	Recognise and use non-unit fractions with small denominators	
Y3	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y3.NF.2	280	Write fractions of a discrete set of objects	Write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	
Y3	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y3.NF.6	283	Order fractions with the same denominators	Order fractions with the same denominators	
Y3	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y3.NF.5	284	Add fractions (like denominators) within 1 whole	Add fractions with the same denominator within one whole	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y3	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y3.NF.5	285	Subtract fractions: like denominators within one	Subtract fractions with the same denominator within one whole	
Y3	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y3.NF.4	286	Recognise, using diagrams, equivalent fractions	Recognise, using diagrams, equivalent fractions with small denominators	
Y3	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y3.NF.1	290	Count up in tenths	Count up in tenths	
Y3	Measurement and Data: Measurement: Maths.KS2.Y3.M.2	273	Understand the concept of perimeter	Understand the concept of perimeter	
Y3	Measurement and Data: Measurement: Maths.KS2.Y3.M.2	274	Measure the perimeter of simple 2-D shapes	Measure the perimeter of simple 2-D shapes	
Y3	Measurement and Data: Measurement: Maths.KS2.Y3.M.3	293	Add and subtract amounts of money to give change	Add and subtract amounts of money to give change, using both £ and p in practical contexts	
Y3	Measurement and Data: Measurement: Maths.KS2.Y3.M.6	294	Know the number of days in each month and year	Know the number of days in each month, year and leap year	
Y3	Measurement and Data: Measurement: Maths.KS2.Y3.M.5	295	Read time to the nearest minute	Read time to the nearest minute	
Y3	Measurement and Data: Measurement: Maths.KS2.Y3.M.6	301	Know the number of seconds in a minute	Know the number of seconds in a minute	
Y3	Measurement and Data: Measurement: Maths.KS2.Y3.M.5	302	Compare time: seconds, minutes and hours	Compare time in terms of seconds, minutes and hours	

Year 4

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y4	Numbers and Operations: Number - number and place value: Maths.KS2.Y4.NPV.2	324	Add 1000 to a given number between 0 and 10 000	Find 1000 more than a given number between 0 and 10 000	
Y4	Numbers and Operations: Number - number and place value: Maths.KS2.Y4.NPV.2	325	Subtract 1000 from a given number up to 10 000	Find 1000 less than a given number between 0 and 10 000	
Y4	Numbers and Operations: Number - number and place value: Maths.KS2.Y4.NPV.4	326	Recognise place value in a four-digit number	Recognise the place value of each digit in a four-digit positive integer	
Y4	Numbers and Operations: Number - number and place value: Maths.KS2.Y4.NPV.6	330	Represent numbers beyond 1000 in different ways	Represent whole numbers beyond 1000 using the number line and other different representations	
Y4	Numbers and Operations: Number - number and place value: Maths.KS2.Y4.NPV.8	338	Solve problems with numbers up to four digits	Use place value and number facts to solve number problems and practical problems with numbers up to four digits	
Y4	Numbers and Operations: Number - number and place value: Maths.KS2.Y4.NPV.1	357	Count on from 0 in multiples of 6	Count on from 0 in multiples of 6	
Y4	Numbers and Operations: Number - number and place value: Maths.KS2.Y4.NPV.1	358	Count on from 0 in multiples of 7	Count on from 0 in multiples of 7	
Y4	Numbers and Operations: Number - number and place value: Maths.KS2.Y4.NPV.1	359	Count on from 0 in multiples of 9	Count on from 0 in multiples of 9	
Y4	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y4.NMD.1	360	Recall basic multiplication and division facts	Recall multiplication and division facts for multiplication tables up to 12 x 12	
Y4	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y4.NMD.2	361	Use place value to multiply mentally	Use place value to multiply mentally, using 0 and 1, among other numbers	
Y4	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y4.NMD.4	362	Multiply: 2- / 3-digit number by a 1-digit number	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y4	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y4.NMD.2	366	Use place value to divide mentally	Use place value to divide mentally by 1, among other numbers	
Y4	Geometry: Geometry: Maths.KS2.Y4.GPS.1	342	Classify geometric shapes based on properties	Compare and classify geometric shapes based on their properties	
Y4	Geometry: Geometry: Maths.KS2.Y4.GPD.1	347	Describe grid position: 1st quadrant coordinates	Describe positions on a 2-D grid as coordinates in the first quadrant	
Y4	Geometry: Geometry: Maths.KS2.Y4.GPS.4	351	Complete symmetric figure from line of symmetry	Complete a simple symmetric figure with respect to a specific line of symmetry	
Y4	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y4.NF.2	375	Recognise when hundredths arise	Recognise that hundredths arise when dividing an object by one hundred or when dividing tenths by ten	
Y4	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y4.NF.2	376	Count up in hundredths	Count up in hundredths	
Y4	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y4.NF.5	382	Write decimal equivalents: tenths / hundredths	Write decimal equivalents of any number of tenths or hundredths	
Y4	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y4.NF.7	385	Find effect: divide 1- / 2-digit numbers by 100	Find the effect of dividing one- or two-digit numbers by 100, identifying the value of the digits in the answers as tenths and hundredths	
Y4	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y4.NF.6	386	Write the decimal equivalent: $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$	Recognise and write the decimal equivalent to $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$	
Y4	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y4.NF.8	387	Know the rules of rounding	When rounding, know that the last digit to keep should remain the same if it is followed by a 0, 1, 2, 3 or 4, but should be increased by one if it is followed by a 5, 6, 7, 8 or 9	
Y4	Measurement and Data: Measurement: Maths.KS2.Y4.M.2	353	Find the perimeter of rectilinear shape (cm & m)	Calculate the perimeter of a rectilinear figure (squares and other shapes) in centimetres and metres	
Y4	Measurement and Data: Measurement: Maths.KS2.Y4.M.3	354	Understand the concept of area	Understand the concept of area	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y4	Measurement and Data: Measurement: Maths.KS2.Y4.M.3	355	Find the area of simple shapes	Find the area of simple shapes	
Y4	Measurement and Data: Measurement: Maths.KS2.Y4.M.3	356	Find an area by counting unit squares	Find the area of rectilinear shapes by counting squares	
Y4	Statistics and Probability: Statistics: Maths.KS2.Y4.S.1	405	Present discrete data on an appropriate graph	Present discrete data using appropriate graphical methods	
Y4	Statistics and Probability: Statistics: Maths.KS2.Y4.S.1	406	Interpret discrete data on an appropriate graph	Interpret discrete data using appropriate graphical methods, including bar charts and time graphs	
Y4	Statistics and Probability: Statistics: Maths.KS2.Y4.S.1	407	Present continuous data on an appropriate graph	Present continuous data using appropriate graphical methods	
Y4	Statistics and Probability: Statistics: Maths.KS2.Y4.S.1	408	Interpret continuous data on appropriate graph	Interpret continuous data using appropriate graphical methods (bar charts and time graphs)	

Year 5

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y5	Numbers and Operations: Number - number and place value: Maths.KS2.Y5.NPV.1	412	Read whole numbers to at least 1 000 000	Read whole numbers to at least 1 000 000	
Y5	Numbers and Operations: Number - number and place value: Maths.KS2.Y5.NPV.1	413	Write whole numbers to at least 1 000 000	Write whole numbers to at least 1 000 000	
Y5	Numbers and Operations: Number - number and place value: Maths.KS2.Y5.NPV.1	416	Order whole numbers to at least 1 000 000	Order whole numbers to at least 1 000 000	
Y5	Numbers and Operations: Number - number and place value: Maths.KS2.Y5.NPV.2	417	Count forwards in steps of powers of 10	Count forwards in steps of powers of 10 for any given number up to 1 000 000	
Y5	Numbers and Operations: Number - number and place value: Maths.KS2.Y5.NPV.2	418	Count backwards in steps of powers of 10	Count backwards in steps of powers of 10 for any given number up to 1 000 000	
Y5	Numbers and Operations: Number - number and place value: Maths.KS2.Y5.NPV.3	420	Count forwards with integers through zero	Count forwards with positive and negative whole numbers, through zero and other number ranges	
Y5	Numbers and Operations: Number - number and place value: Maths.KS2.Y5.NPV.3	421	Count backwards with integers through zero	Count backwards with positive and negative whole numbers, through zero and other number ranges	
Y5	Numbers and Operations: Number - number and place value: Maths.KS2.Y5.NPV.5	426	Solve problems: numbers up to 1 000 000	Use place value and number facts to solve number problems and practical problems with numbers up to 1 000 000	
Y5	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y5.NMD.1	441	Identify the factors of numbers up to 1 000 000	Identify the factors of numbers up to 1 000 000, finding factor pairs and common factors of two numbers, among other approaches	
Y5	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y5.NMD.1	442	Find the multiples of numbers up to 1 000 000	Identify the multiples of numbers up to 1 000 000	
Y5	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y5.NMD.2	443	Know meaning of composite / prime numbers / factors	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y5	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y5.NMD.3	444	Establish whether a number up to 100 is prime	Establish whether a number up to 100 is a prime number	
Y5	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y5.NMD.8	446	Use square numbers, including proper notation	Recognise and use square numbers and the notation for squared (2) numbers	
Y5	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y5.NMD.8	447	Use cube numbers, including proper notation	Recognise and use cube numbers and the notation for cubed (3) numbers	
Y5	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y5.NMD.10	452	Solve problems involving the four operations	Solve problems involving the four operations and a combination of these, understanding the meaning of the equals sign	
Y5	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y5.NAS.3	481	Use rounding to check answers to calculations	Use rounding to check answers to calculations with whole numbers up to 1 000 000 and decimals to one decimal place	
Y5	Geometry: Geometry: Maths.KS2.Y5.GPS.3	515	Draw given angles, and measure them in degrees	Draw given angles, and measure angles in degrees ($^{\circ}$)	
Y5	Geometry: Geometry: Maths.KS2.Y5.GPS.4.a	516	Identify angles at a point and one whole turn	Identify angles at a point and one whole turn, each totalling 360°	
Y5	Geometry: Geometry: Maths.KS2.Y5.GPS.5	520	Use properties of rectangles: missing lengths	Use the properties of rectangles to deduce related facts and find missing lengths	
Y5	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y5.NF.3	461	Write maths statements > 1 as a mixed number	Write mathematical statements > 1 as a mixed number	
Y5	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y5.NF.4	463	Add fractions with the same denominator	Add fractions with the same denominator	
Y5	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y5.NF.4	465	Subtract fractions with the same denominator	Subtract fractions with the same denominator	
Y5	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y5.NF.6	470	Write decimal numbers as fractions	Write decimal numbers as fractions	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y5	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y5.NF.11	484	Write percentages in fraction or decimal form	Write percentages in fraction or decimal form	
Y5	Measurement and Data: Measurement: Maths.KS2.Y5.M.3	490	Find the perimeter: composite rectilinear shape	Calculate the perimeter of composite rectilinear shapes in centimetres and metres	
Y5	Measurement and Data: Measurement: Maths.KS2.Y5.M.2	499	Use approximations: metric / imperial units	Use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	
Y5	Statistics and Probability: Statistics: Maths.KS2.Y5.S.2	522	Complete information in tables	Complete information in tables	

Year 6

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y6	Numbers and Operations: Number - number and place value: Maths.KS2.Y6.NPV.2	533	Round numbers to 10,000,000 to any place	Round any whole number up to 10 000 000 to a required degree of accuracy	
Y6	Numbers and Operations: Number - number and place value: Maths.KS2.Y6.NPV.4	536	Solve problems: numbers up to 10 000 000	Use place value and number facts to solve number problems and practical problems with numbers up to 10 000 000	
Y6	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y6.NASMD.6	542	Know the order of the four operations	Know the order that the four operations should be carried out in	
Y6	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y6.NASMD.6	543	Calculate, using the order of the 4 operations	Use their knowledge of the order of operations to carry out calculations involving the four operations	
Y6	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y6.NASMD.5	544	Find common factors: numbers up to 10 000 000	Identify common factors in numbers up to 10 000 000	
Y6	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y6.NASMD.5	545	Find common multiples: numbers up to 10 000 000	Identify common multiples of numbers up to 10 000 000	
Y6	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y6.NASMD.5	546	Identify prime numbers up to 10 000 000	Identify prime numbers in numbers up to 10 000 000	
Y6	Numbers and Operations: Number - arithmetic operations: Maths.KS2.Y6.NASMD.9	584	Use estimation to check answers and accuracy	Use estimation to check answers to calculations with numbers up to 10 000 000 and decimals to three decimal places, and determine, in the context of a problem, an appropriate degree of accuracy	
Y6	Geometry: Geometry: Maths.KS2.Y6.GPS.2	606	Build accurate, simple 3-D shapes	Build accurate, simple 3-D shapes	
Y6	Geometry: Geometry: Maths.KS2.Y6.GPD.1	607	Describe positions in all four quadrants	Understand and describe positions on the full coordinate grid (all four quadrants)	
Y6	Geometry: Geometry: Maths.KS2.Y6.GPD.2	610	Reflect simple shapes over the axes	Reflect simple shapes on the coordinate plane in the axes	
Y6	Geometry: Geometry: Maths.KS2.Y6.GPS.4	612	Illustrate and name parts of circles	Illustrate and name parts of circles: radius, diameter and circumference, among others	
Y6	Geometry: Geometry: Maths.KS2.Y6.GPS.3	614	Classify shapes and find angles in triangles	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles	
Y6	Geometry: Geometry: Maths.KS2.Y6.GPS.3	615	Classify shapes and find quadrilateral angles	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any quadrilaterals	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y6	Geometry: Geometry: Maths.KS2.Y6.GPS.3	616	Classify shapes and find regular polygon angles	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any regular polygons	
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.1	558	Use common factors to simplify fractions	Use common factors to simplify fractions	
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.1	559	Express fractions in the same denominator	Use common multiples to express fractions in the same denomination	
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.3	566	Add fractions with different denominators	Add fractions with different denominators using the concept of equivalent fractions	
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.3	567	Add mixed numbers	Add mixed numbers using the concept of equivalent fractions	
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.3	568	Subtract fractions with different denominators	Subtract fractions with different denominators using the concept of equivalent fractions	
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.3	569	Subtract mixed numbers	Subtract mixed numbers using the concept of equivalent fractions	
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.4	570	Multiply simple proper fractions and simplify	Multiply simple pairs of proper fractions, writing answers in their simplest form	
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.5	571	Divide proper fractions by whole numbers	Divide proper fractions by whole numbers	
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.6	577	Associate a fraction with division	Associate a fraction with division	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.6	578	Find decimal equivalents for a simple fraction	Calculate decimal fraction equivalents for a simple fraction	
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.8	582	Multiply: one-digit decimal by whole numbers	Multiply one-digit numbers with one or two decimal places by whole numbers	
Y6	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS2.Y6.NF.9	583	Divide: quotients up to two decimal places	Use written division in cases where answers have up to two decimal places	
Y6	Measurement and Data: Measurement: Maths.KS2.Y6.M.5	599	Recognise when to use formulae for area & volume	Recognise when it is possible to use formulae for area and volume of shapes	
Y6	Measurement and Data: Measurement: Maths.KS2.Y6.M.6	600	Calculate: area of parallelograms and triangles	Calculate the area of parallelograms and triangles	
Y6	Measurement and Data: Measurement: Maths.KS2.Y6.M.7	601	Find volume of cubes / cuboids (standard units)	Calculate volume of cubes and cuboids using standard units	
Y6	Statistics and Probability: Statistics: Maths.KS2.Y6.S.1	618	Construct and use line graphs to solve problems	Construct line graphs and use these to solve problems	
Y6	Statistics and Probability: Statistics: Maths.KS2.Y6.S.1	619	Interpret and use line graphs to solve problems	Interpret line graphs and use these to solve problems	
Y6	Statistics and Probability: Statistics: Maths.KS2.Y6.S.1	621	Construct and use pie charts to solve problems	Construct pie charts and use these to solve problems	
Y6	Statistics and Probability: Statistics: Maths.KS2.Y6.S.1	622	Interpret and use pie charts to solve problems	Interpret pie charts and use these to solve problems	
Y6	Statistics and Probability: Statistics: Maths.KS2.Y6.S.2	623	Interpret the mean as an average	Interpret the mean as an average	
Y6	Statistics and Probability: Statistics: Maths.KS2.Y6.S.2	624	Calculate the mean as an average	Calculate the mean as an average	
Y6	Algebra: Ratio, proportion and rates of change: Maths.KS2.Y6.RP.1	585	Understand simple unitary methods	Understand simple unitary methods	
Y6	Algebra: Ratio, proportion and rates of change: Maths.KS2.Y6.RP.3	592	Understand the meaning of enlarging a shape	Understand that when a shape is enlarged all side lengths are increased by the same multiple	
Y6	Algebra: Algebra: Maths.KS2.Y6.A.1	552	Use simple formulae	Use simple formulae	

Year 7

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y7	Numbers and Operations: Number - number and place value: Maths.KS3.N.1	625	Understand place value for decimals and integers	Understand place value for decimals, measures and positive integers of any size	
Y7	Numbers and Operations: Number - number and place value: Maths.KS3.N.2	636	Relate a decimal to a point on a number line	Relate a decimal number up to two decimal places to a point on a number line	
Y7	Numbers and Operations: Number - number and place value: Maths.KS3.N.1	637	Use place value when solving problems	Use place value for decimals, measures and integers of any size when solving number problems and practical problems	
Y7	Numbers and Operations: Number - arithmetic operations: Maths.KS3.N.4	627	Add and subtract integers	Add and subtract integers, using formal written methods among others	
Y7	Numbers and Operations: Number - arithmetic operations: Maths.KS3.N.4	628	Multiply and divide integers	Multiply and divide integers, using formal written methods among others	
Y7	Numbers and Operations: Number - arithmetic operations: Maths.KS3.N.15	633	Use a calculator to calculate accurate results	Use a calculator and other technologies to calculate results accurately	
Y7	Numbers and Operations: Number - arithmetic operations: Maths.KS3.N.6	657	Use relationships involving inverse operations	Recognise and use relationships between inverse operations and other operations	
Y7	Geometry: Geometry: Maths.KS3.GM.1	676	Derive formulae to calculate area	Derive formulae to calculate the area of triangles, parallelograms and trapezia	
Y7	Geometry: Geometry: Maths.KS3.GM.5	680	Draw figures with reflective / rotational symmetry	Draw using conventional terms and notations: points, lines, parallel lines, perpendicular lines, right angles, regular polygons, and other polygons that are reflectively and rotationally symmetric	
Y7	Geometry: Geometry: Maths.KS3.GM.10	689	Apply the properties of angles to solve problems	Apply the properties of angles at a point, angles at a point on a straight line and vertically opposite angles to solve problems with geometric shapes	
Y7	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS3.N.10	654	Express one quantity as a percentage of another	Express one quantity as a percentage of another	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y7	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS3.N.10	665	Express a quantity as a percentage of another	Express one quantity as a percentage of another where the percentage is less than or greater than 100%	
Y7	Algebra: Ratio, proportion and rates of change: Maths.KS3.RP.3	664	Express a quantity as a fraction (>1) of another	Express one quantity as a fraction of another where the fraction is greater than 1	
Y7	Algebra: Ratio, proportion and rates of change: Maths.KS3.RP.9	672	Solve problems involving direct proportion	Solve problems involving direct proportion	
Y7	Algebra: Algebra: Maths.KS3.A.2	660	Substitute numbers into formulae and expressions	Substitute numerical values into formulae, expressions and scientific formulae	
Y7	Algebra: Algebra: Maths.KS3.A.5	660	Substitute numbers into formulae and expressions	Substitute numerical values into formulae, expressions and scientific formulae	
Y7	Algebra: Algebra: Maths.KS3.A.4.1	661	Simplify / manipulate algebraic expressions	Simplify and manipulate algebraic expressions to maintain equivalence by: collecting like terms, multiplying a single term over a bracket	
Y7	Algebra: Algebra: Maths.KS3.A.4.2	661	Simplify / manipulate algebraic expressions	Simplify and manipulate algebraic expressions to maintain equivalence by: collecting like terms, multiplying a single term over a bracket	
Y7	Statistics and Probability: Probability: Maths.KS3.P.1	691	Use ideas of randomness and fairness	Use ideas of randomness and fairness, drawing on experience	
Y7	Statistics and Probability: Probability: Maths.KS3.P.1	695	Identify probabilities using a 0 – 1 scale	Use the 0 – 1 probability scale to identify probabilities or estimates of probabilities	

Year 8

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y8	Numbers and Operations: Number - arithmetic operations: Maths.KS3.N.7	739	Work with integer powers / square roots / real roots	Use integer powers, real square roots and real roots (higher than cube) in calculations	
Y8	Geometry: Geometry: Maths.KS3.GM.16	758	Interpret relationships geometrically	Interpret mathematical relationships geometrically	
Y8	Geometry: Geometry: Maths.KS3.GM.4	766	Know perpendicular distance as shortest distance	Recognise the perpendicular distance from a point to a line as the shortest distance to the line	
Y8	Geometry: Geometry: Maths.KS3.GM.6	770	Standard labelling of sides / angles of triangles	Know the standard conventions for labelling the sides and angles of triangle ABC	
Y8	Geometry: Geometry: Maths.KS3.GM.7	779	Derive / illustrate properties of plane figures	Derive and illustrate properties of triangles, quadrilaterals, circles, and other plane figures using appropriate language and technologies	
Y8	Geometry: Geometry: Maths.KS3.GM.12	782	Derive properties of regular polygons	Use the sum of angles in a triangle to derive properties of regular polygons	
Y8	Statistics and Probability: Statistics: Maths.KS3.S.3	791	Describe relationships of bivariate data	Describe simple mathematical relationships between two variables (bivariate data) in observational and experimental contexts	
Y8	Algebra: Ratio, proportion and rates of change: Maths.KS3.RP.5	722	Know the multiplicative relationship as a ratio	Understand that a multiplicative relationship between two quantities can be expressed as a ratio or a fraction	
Y8	Algebra: Ratio, proportion and rates of change: Maths.KS3.RP.6	722	Know the multiplicative relationship as a ratio	Understand that a multiplicative relationship between two quantities can be expressed as a ratio or a fraction	
Y8	Algebra: Ratio, proportion and rates of change: Maths.KS3.RP.9	728	Solve problems involving inverse proportion	Solve problems involving inverse proportion	
Y8	Algebra: Algebra: Maths.KS3.A.8	732	Work with coordinates in all four quadrants	Work with coordinates in all four quadrants where x and y can be either positive or negative	
Y8	Algebra: Algebra: Maths.KS3.A.7	745	Solve a multi-step linear equation, 1 variable	Use algebraic methods to solve multi-step linear equations in one variable (those that require rearrangement, and others)	
Y8	Algebra: Algebra: Maths.KS3.A.9	753	Sketch graphs of linear / quadratic functions	Sketch and produce graphs of linear and quadratic functions of one variable with appropriate scaling, using equations in x and y and the Cartesian plane	
Y8	Algebra: Algebra: Maths.KS3.A.10	755	Interpret relationships with algebra / graphs	Interpret mathematical relationships both algebraically and graphically	
Y8	Algebra: Algebra: Maths.KS3.A.4.3	757	Manipulate expressions to maintain equivalence	Manipulate algebraic expressions to maintain equivalence by: taking out common factors, expanding the product of two or more binomials	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y8	Algebra: Algebra: Maths.KS3.A.4.4	757	Manipulate expressions to maintain equivalence	Manipulate algebraic expressions to maintain equivalence by: taking out common factors, expanding the product of two or more binomials	
Y8	Statistics and Probability: Probability: Maths.KS3.P.1	788	Analyse outcomes of probability experiments	Record and analyse the frequency of outcomes of simple probability experiments with two variables	
Y8	Statistics and Probability: Probability: Maths.KS3.P.3	789	Show possible outcomes of events: tables / grids	Construct and use tables and grids to show the possible outcomes of two or more events	

Year 9

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y9	Numbers and Operations: Number - arithmetic operations: Maths.KS3.N.8	804	Write numbers in standard form	Write numbers in standard form	
Y9	Numbers and Operations: Number - arithmetic operations: Maths.KS3.N.5	806	Order of operations: powers / roots / reciprocals	With brackets use conventional notation for the priority of operations, addressing powers, roots and reciprocals, among other operations	
Y9	Geometry: Geometry: Maths.KS3.GM.1	820	Derive formulae for the volume of cylinders	Derive formulae to calculate the volume of cylinders	
Y9	Geometry: Geometry: Maths.KS3.GM.15	822	Solve problems: properties of 3-D shapes	Use the properties of faces, surfaces, edges and vertices of cubes, cuboids, prisms, cylinders, pyramids, cones and spheres to solve problems in 3-D	
Y9	Numbers and Operations: Number - Fractions (including decimals and percentages): Maths.KS3.N.10	796	Interpret percentage change multiplicatively	Interpret percentage change multiplicatively	
Y9	Algebra: Ratio, proportion and rates of change: Maths.KS3.RP.8	798	Solve original value problems	Solve original value problems	
Y9	Algebra: Ratio, proportion and rates of change: Maths.KS3.RP.9	800	Solve problems: proportional relationships	Solve problems involving directly proportional and inversely proportional relationships represented algebraically	
Y9	Algebra: Algebra: Maths.KS3.A.5	807	Rearrange formulae to change the subject	Rearrange formulae to change the subject	
Y9	Algebra: Algebra: Maths.KS3.A.6	808	Use expressions and graphs to model situations	Use algebraic expressions, formulae and graphs to model situations and procedures	
Y9	Algebra: Algebra: Maths.KS3.A.11	810	Calculate intercepts of graphs: linear equations	Calculate intercepts of graphs of such linear equations numerically, graphically and algebraically	
Y9	Algebra: Algebra: Maths.KS3.A.11	811	Interpret gradients / intercepts of linear graphs	Interpret gradients and intercepts of graphs of such linear equations numerically, graphically and algebraically	
Y9	Algebra: Algebra: Maths.KS3.A.12	812	Solve simultaneous linear equations graphically	Use linear and quadratic graphs to find approximate solutions to simultaneous linear equations	
Y9	Statistics and Probability: Probability: Maths.KS3.P.3	823	Use Venn diagrams to show outcomes of events	Construct and use simple Venn diagrams to show the possible outcomes of two or more events	

Year 10

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y10	Geometry: Geometry: Maths.KS4.GM.1	900	Use fractional scale factors	Use fractional scale factors	
Y10	Geometry: Geometry: Maths.KS4.GM.5	901	Interpret plans and elevations of 3-D shapes	Interpret plans and elevations of 3-D shapes	
Y10	Geometry: Geometry: Maths.KS4.GM.1	904	Use negative scale factors	Use negative scale factors	
Y10	Geometry: Geometry: Maths.KS4.GM.2	908	Describe effects of multiple transformations	Describe the changes and invariance achieved by combinations of rotations, reflections and translations	
Y10	Geometry: Geometry: Maths.KS4.GM.9	911	Apply concept of similarity: lengths in figures	Apply the concept of similarity, including the relationships between lengths in similar figures	
Y10	Geometry: Geometry: Maths.KS4.GM.15	918	Apply addition and subtraction of vectors	Apply addition and subtraction of vectors	
Y10	Geometry: Geometry: Maths.KS4.GM.15	919	Apply multiplication of vectors by a scalar	Apply multiplication of vectors by a scalar	
Y10	Geometry: Geometry: Maths.KS4.GM.10	921	Find angles and lengths: right-angled triangles	Apply Pythagoras' Theorem and trigonometric ratios to find angles and lengths in right-angled triangles and, where possible, general triangles in two- and three-dimensional figures	
Y10	Geometry: Geometry: Maths.KS4.GM.13	924	Know $A = \frac{1}{2}ab \sin C$ to find a length or angle	Know $Area = \frac{1}{2} ab \sin C$ to calculate the sides or angles of any triangle	
Y10	Geometry: Geometry: Maths.KS4.GM.3	930	Identify circle properties	Identify circle properties: centre, radius, chord, diameter, circumference, tangent, arc, sector and segment, among others	
Y10	Geometry: Geometry: Maths.KS4.GM.4	931	Apply standard circle theorems	Apply the standard circle theorems concerning angles, radii, tangents and chords, and use them to prove related results	
Y10	Geometry: Geometry: Maths.KS4.GM.7	940	Calculate areas of sectors of circles	Calculate areas of sectors of circles	
Y10	Statistics and Probability: Statistics: Maths.KS4.S.3	952	Interpret histograms with equal class intervals	Interpret diagrams for grouped discrete data and continuous data (histograms with equal class intervals) and know their appropriate use	
Y10	Statistics and Probability: Statistics: Maths.KS4.S.3	953	Construct diagrams: discrete / continuous data	Construct diagrams for grouped discrete data and continuous data (histograms with unequal class intervals and cumulative frequency graphs) and know their appropriate use	
Y10	Statistics and Probability: Statistics: Maths.KS4.S.1	956	Calculate statistics, select most appropriate	Calculate statistics and select those most appropriate to the problem or which address the questions posed	
Y10	Statistics and Probability: Statistics: Maths.KS4.S.1	958	Calculate statistics for sets of data	Calculate statistics for sets of discrete and continuous data	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y10	Statistics and Probability: Statistics: Maths.KS4.S.1	959	Differentiate a sample from a population	Understand the difference between a sample and a population	
Y10	Statistics and Probability: Statistics: Maths.KS4.S.1	960	Infer properties of populations from a sample	Infer properties of populations from a sample, whilst knowing the limitations of sampling	
Y10	Statistics and Probability: Statistics: Maths.KS4.S.1	961	Infer properties of distributions from a sample	Infer properties of distributions from a sample, whilst knowing the limitations of sampling	
Y10	Statistics and Probability: Statistics: Maths.KS4.S.6	968	Use scatter graphs of bivariate data	Use scatter graphs of bivariate data	
Y10	Algebra: Ratio, proportion and rates of change: Maths.KS4.RP.3	831	Interpret equations describing direct proportion	Interpret equations that describe direct proportion	
Y10	Algebra: Ratio, proportion and rates of change: Maths.KS4.RP.6	834	Solve problems: repeated proportional increase	Solve problems involving repeated proportional increase	
Y10	Algebra: Ratio, proportion and rates of change: Maths.KS4.RP.6	835	Solve problems: repeated proportional decrease	Solve problems involving repeated proportional decrease	
Y10	Algebra: Algebra: Maths.KS4.A.6	872	Sketch graph: linear, quadratic, cubic functions	Sketch graphs of linear, quadratic and cubic functions	
Y10	Algebra: Algebra: Maths.KS4.A.6	873	Interpret graphs: 1st / 2nd / 3rd degree functions	Interpret graphs of linear, quadratic and cubic functions	
Y10	Algebra: Algebra: Maths.KS4.A.6	877	Recognise graphs of the exponential function	Recognise graphs of the exponential function	
Y10	Algebra: Algebra: Maths.KS4.A.6	878	Sketch graphs of the exponential function	Sketch graphs of the exponential function	
Y10	Algebra: Algebra: Maths.KS4.A.6	879	Interpret graphs of the exponential function	Interpret graphs of the exponential function	
Y10	Algebra: Algebra: Maths.KS4.A.9	885	Calculate gradients and areas from graphs	Calculate gradients of quadratic graphs and other non-linear graphs, among others, and areas under these graphs	
Y10	Algebra: Algebra: Maths.KS4.A.3	897	Interpret simple expressions as functions	Where appropriate, interpret simple expressions as functions with inputs and outputs and interpret the reverse process as the inverse function	
Y10	Algebra: Algebra: Maths.KS4.A.3	898	Determine the composite of two functions	Where appropriate interpret the succession of two functions as a 'composite function' and interpret the reverse process as the inverse function	
Y10	Algebra: Algebra: Maths.KS4.A.6	925	Recognise graphs of the trigonometric functions	Recognise graphs of the trigonometric functions (with arguments in degrees) $y = \sin x$, $y = \cos x$ and $y = \tan x$ for angles of any size	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y10	Algebra: Algebra: Maths.KS4.A.6	926	Sketch graphs of the trigonometric functions	Sketch graphs of the trigonometric functions (with arguments in degrees) $y = \sin x$, $y = \cos x$ and $y = \tan x$ for angles of any size	
Y10	Algebra: Algebra: Maths.KS4.A.6	927	Interpret graphs of the trigonometric functions	Interpret graphs of the trigonometric functions (with arguments in degrees) $y = \sin x$, $y = \cos x$ and $y = \tan x$ for angles of any size	
Y10	Statistics and Probability: Probability: Maths.KS4.P.3	943	Calculate the probability of independent events	Calculate the probability of independent combined events, using tree diagrams and other representations, and know the underlying assumptions	
Y10	Statistics and Probability: Probability: Maths.KS4.P.1	948	Apply: mutually exclusive probabilities sum to 1	Apply the property that the probabilities of an exhaustive set of mutually exclusive events sum to one	
Y10	Statistics and Probability: Probability: Maths.KS4.P.2	950	Understand: vast unbiased data and theory agree	Understand that empirical unbiased samples tend towards theoretical probability distributions, with increasing sample size	

Year 11

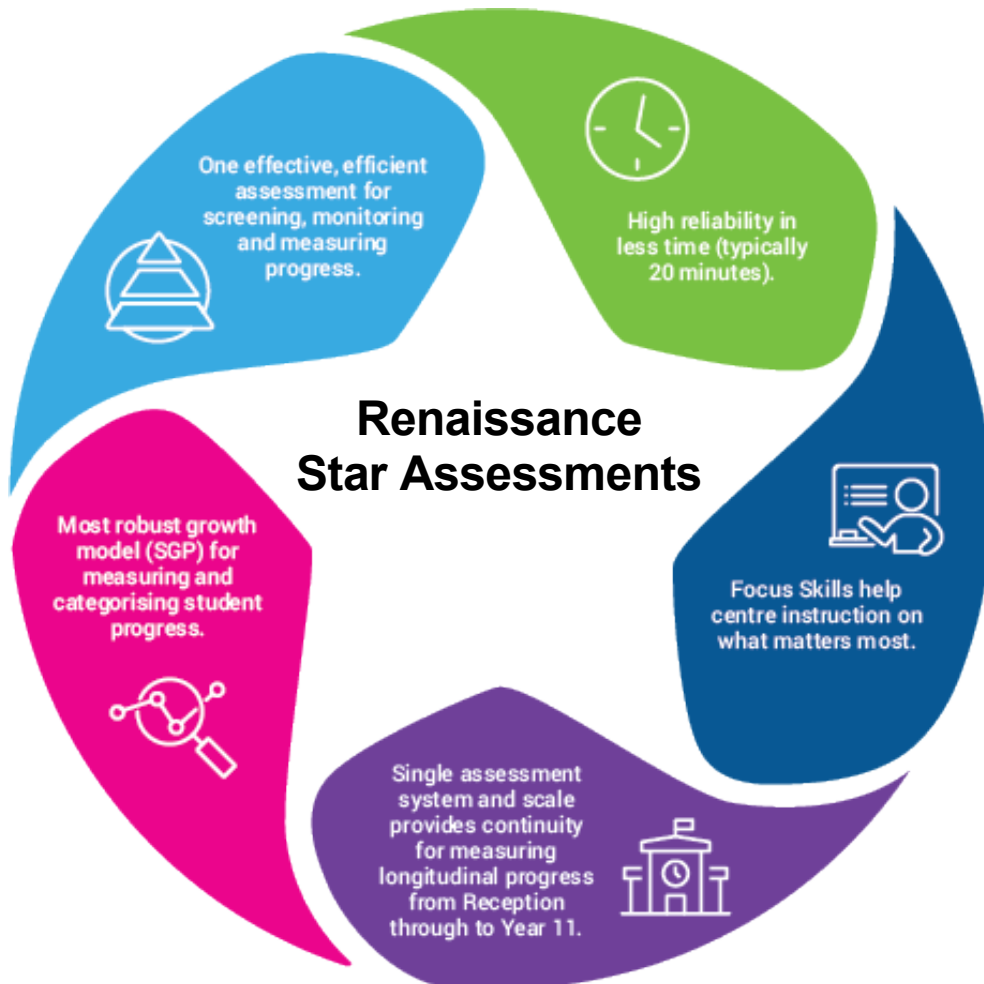
Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y11	Numbers and Operations: Number - arithmetic operations: Maths.KS4.N.4	976	Simplify surd expressions involving squares	Simplify surd expressions involving squares	
Y11	Geometry: Geometry: Maths.KS4.GM.15	1015	Use vectors to make geometric arguments / proofs	Use vectors to construct geometric arguments and proofs	
Y11	Geometry: Geometry: Maths.KS4.GM.12	1022	Apply the sine and cosine rules	Apply the sine rule, $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$, and cosine rule, $a^2 = b^2 + c^2 - 2bc \cos A$, to find unknown lengths and angles	
Y11	Statistics and Probability: Statistics: Maths.KS4.S.5	1031	Apply statistics to describe a population	Apply statistics to describe a population	
Y11	Statistics and Probability: Statistics: Maths.KS4.S.6	1032	Estimate lines of best fit on scatter graphs	Draw estimated lines of best fit on scatter graphs	
Y11	Statistics and Probability: Statistics: Maths.KS4.S.6	1034	Interpolate trends based on scatter graphs	Interpolate apparent trends based on scatter graphs whilst knowing the dangers of doing so	
Y11	Statistics and Probability: Statistics: Maths.KS4.S.6	1035	Extrapolate trends based on scatter graphs	Extrapolate apparent trends based on scatter graphs whilst knowing the dangers of doing so	
Y11	Algebra: Ratio, proportion and rates of change: Maths.KS4.RP.3	983	Interpret equations: inverse proportion	Interpret equations that describe inverse proportion	
Y11	Algebra: Ratio, proportion and rates of change: Maths.KS4.RP.4	986	Interpret the gradient as a rate of change	Interpret the gradient of a straight line graph as a rate of change	
Y11	Algebra: Ratio, proportion and rates of change: Maths.KS4.RP.5	987	Interpret the gradient of a chord	Interpret the gradient of a chord as the average rate of change	
Y11	Algebra: Ratio, proportion and rates of change: Maths.KS4.RP.5	988	Interpret the gradient at a point	Interpret the gradient at a point on a curve as the instantaneous rate of change	
Y11	Algebra: Ratio, proportion and rates of change: Maths.KS4.RP.6	997	Work with general iterative processes	Work with general iterative processes	
Y11	Algebra: Ratio, proportion and rates of change: Maths.KS4.RP.6	998	Model real contexts involving direct proportion	Model real contexts where quantities repeatedly change in direct proportion	
Y11	Algebra: Algebra: Maths.KS4.A.1.2	978	Simplify and manipulate algebraic expressions	Simplify and manipulate algebraic expressions (e.g., surds, algebraic fractions) by simplifying expressions involving sums	

Yr.	Domain Group:	No.	Focus Skill	Description	Notes
Y11	Algebra: Algebra: Maths.KS4.A.1.2	979	Simplify expressions with sums / products / powers	Simplify and manipulate algebraic expressions (involving surds, algebraic fractions and other elements) by simplifying expressions involving sums, products and powers, and the laws of indices	
Y11	Algebra: Algebra: Maths.KS4.A.1.1	1000	Factorise quadratic expressions: ax^2+bx+c	Simplify and manipulate algebraic expressions by factorising quadratic expressions of the form $ax^2 + bx + c$	
Y11	Algebra: Algebra: Maths.KS4.A.11	1004	Solve quadratic equations: factorise	Solve quadratic equations algebraically by factorising	
Y11	Algebra: Algebra: Maths.KS4.A.11	1005	Find solutions using a graph: quadratic equation	Find approximate solutions to quadratic equations by using a graph	
Y11	Algebra: Algebra: Maths.KS4.A.5	1007	Complete the square to find turning point	Deduce turning points of quadratic functions by completing the square	
Y11	Algebra: Algebra: Maths.KS4.A.11	1008	Solve quadratic equations: quadratic formula	Solve quadratic equations by using the quadratic formula	
Y11	Algebra: Algebra: Maths.KS4.A.16	1012	Recognise and use simple geometric progressions	Recognise and use simple geometric progressions	
Y11	Algebra: Algebra: Maths.KS4.A.2	1016	Use algebra to support and construct proofs	Use algebra to support and construct proofs	
Y11	Algebra: Algebra: Maths.KS4.A.7	1019	Sketch translations of a given function	Sketch translations of a given function	
Y11	Algebra: Algebra: Maths.KS4.A.7	1020	Sketch reflections of a given function	Sketch reflections of a given function	
Y11	Algebra: Algebra: Maths.KS4.A.10	1024	Use the equation of a circle centered at origin	Recognise and use the equation of a circle with centre at the origin	
Y11	Algebra: Algebra: Maths.KS4.A.10	1026	Find equation: tangent to circle at given point	Find the equation of a tangent to a circle at a given point	
Y11	Statistics and Probability: Probability: Maths.KS4.P.3	1028	Calculate the probability of dependent events	Calculate the probability of dependent combined events, using tree diagrams and other representations, and know the underlying assumptions	
Y11	Statistics and Probability: Probability: Maths.KS4.P.4	1029	Compute conditional probability: tables / diagrams	Calculate conditional probabilities through representation using expected frequencies with two-way tables, tree diagrams or Venn diagrams	

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