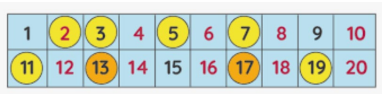
Y7

Summer

Assessment point

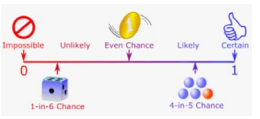
Prime numbers & proof

What to expect:
Identify Factors and Multiples, Investigate Special Numbers, Identify Highest Common Factor and Lowest Common Multiple, using Prime Numbers, Investigate Conjectures and Proofs.



Sets & probability

What to expect:
Represent Sets, Identify Intersections and Unions, Probability Introduction, Calculating Probabilities.



May Half term

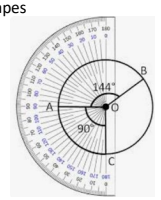
Developing number sense

What to expect:
Make Connections With Integers, Make Connections with Fractions and Decimals, Estimating Solutions, Using Known Facts

Constructing, measuring & using geometric notation

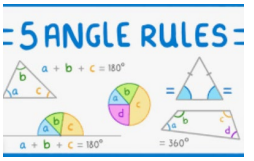
Easter

What to expect:
Geometric Notation, Working with Angles, Constructing Shapes with Specialist Equipment, Forming Pie Charts



Developing geometric reasoning

What to expect: Understand
Understand Angle Properties of Points, Lines, Triangles and Quadrilaterals, Identify Angle Properties of Straight Lines and Polygons, Investigate Geometric Proof.



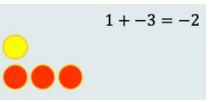
Assessment point

Addition & subtraction of fractions

What to expect:
Converting Fractions, Adding and Subtracting Unit, Non-Unit and Improper Fractions, Evaluating Fractions with Algebraic Terms.

Four operations with directed number

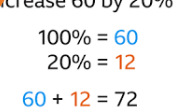
What to expect: Understand Directed Number, Adding, Subtracting, Multiplying and Dividing Directed Number, Substitution with Directed Number, Two-Step Equations, Order of Operations, Evaluating Powers and Roots.



Feb Half term

Fraction & percentages of amounts

What to expect:
Calculating Fractions of Amounts, Calculating Percentages of Amounts, Calculating Percentages Greater than 100%



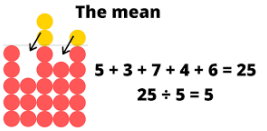
Solving problems with addition & subtraction

Xmas

What to expect:
Linking Addition and Subtraction, Mental and Written Methods for Addition and Subtraction, Adding and Subtracting with Standard Form

Solving problems with multiplication & division

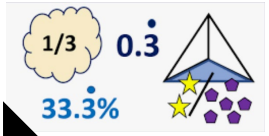
What to expect:
Linking Multiplication and Division, Multiplying with Powers of 10, Written Methods for Multiplication and Division, Using the Mean, Order of Operations.



Assessment point

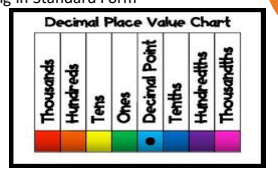
Fraction, decimal & percentage equivalence

What to expect:
Comparing Tenths and Hundredths, Converting Fractions and Decimals, Using Percentages, Understanding Pie Charts, Understanding Fractions Below and Greater Than 1, Linking Fractions and Division.



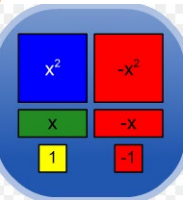
Place value & ordering integers & decimals

What to expect:
Reading, Writing and Comparing Integers, Using Ordered Lists, Rounding to Powers of 10, Understanding Decimals, Rounding to Significant Figures, Writing in Standard Form



Oct Half term

Equality and Equivalence



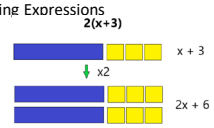
September

Sequences

What to expect:
Sequences – Shapes, Linear Sequences, Non-Linear Sequences, Representing Sequences, Missing Numbers in Sequences

Understand and Use Algebraic Notation

What to expect:
One and Two-Step Function Machines, Calculating Inputs and Outputs,
Using Expressions, Decoding Expressions



What to expect:
Using the Equal and Equivalence Symbol, One-Step Linear Equations, Understand Like and Unlike Terms, Collecting Like Terms

Y8

Summer

Assessment point

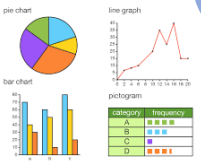
Measures of location

What to expect:
Using Averages, Averages from Tables (H), Comparing Data

Number of marks	Frequency	Mid-point	Frequency × Mid-point
0 - 9	3	$\frac{0+9}{2} = 4.5$	$3 \times 4.5 = 13.5$
10 - 19	7	$\frac{10+19}{2} = 14.5$	$7 \times 14.5 = 101.5$
20 - 29	9	$\frac{20+29}{2} = 24.5$	$9 \times 24.5 = 220.5$
30 - 39	6	$\frac{30+39}{2} = 34.5$	$6 \times 34.5 = 207$
	n = 25		Total = 542.5

The data handling cycle

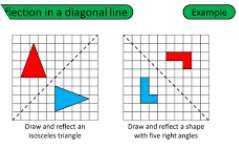
What to expect:
Collecting Data, Lines and Charts, Comparing Data



May Half term

Line symmetry & reflection

What to expect:
Line Symmetry of Shapes, Reflecting in Horizontal, Vertical and Diagonal Lines.

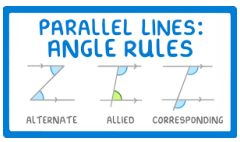


Angles in parallel lines & polygons

Easter

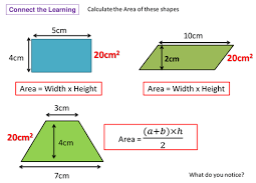
Assessment point

What to expect:
Investigating Parallel Lines, Angles in Quadrilaterals, Exterior and Interior Angles of Polygons, Geometric Proof, Constructing Bisectors (H)



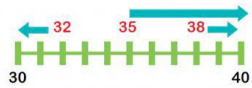
Area of trapezia & circles

What to expect:
Area of Triangles, Quadrilaterals, Circles and Compound Shapes



Number sense

What to expect:
Rounding, Estimating and Calculating, Decimal Places, Calculating in Context, Units of Area and Volume (H)

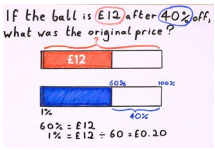


Standard index form

What to expect:
Large Number and Decimals Written in Standard Form, Mental and Written Methods to Calculate with Standard Form, Negative and Fractional Powers (H)

Fractions & percentages

What to expect:
Using Multipliers, Expressing as a Percentage, Reverse Percentages (H)



Feb Half term

Indices

What to expect:
Understand Indices, Multiplying and Dividing Expressions using Indices, Powers of Powers (H)

$9^5 \div 9^2 = 9^3$

$4^6 \div 4^4 = 4^2$

$3^5 \div 3^{-7} = 3^{12}$

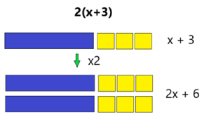
What do you notice?

Brackets, equations & Inequalities

Xmas

Assessment point

What to expect:
Forming and Using Expressions, Using Brackets, Brackets and Equations, Understand Inequalities, Unknowns on Both Sides (H)

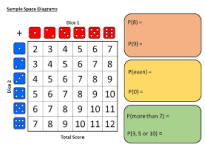


Sequences

What to expect:
Linear and Non-Linear Sequences. Using Expressions to Generate Sequences.

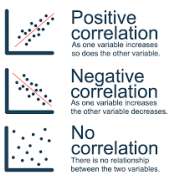
Tables & probability

What to expect:
Sample Spaces and Probability, Using Diagrams to Find Probabilities.



Representing Data

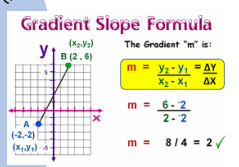
What to expect:
Understand and Draw Scatter graphs, Identify Types of Data, Grouping Data, Draw and Interpret Two-Way Tables



Oct Half term

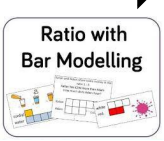
Working in the Cartesian plane

What to expect:
Plotting Points and Lines, Drawing Lines in the Form y=kx, y= x + a and y = mx + c, Lines With a Negative Gradient, Non-Linear Graphs (H), Midpoint of a Line Segment (H)



September

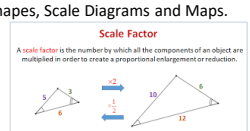
Ratio & Scale



What to expect:
Representing Ratios, Solving Ratio Problems, Dividing into a Ratio, Simplifying Ratios, Ratios in Circles and Graphs

Multiplicative change

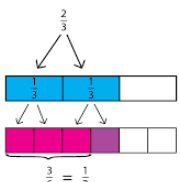
What to expect:
Direct Proportion, Conversions, Similar Shapes, Scale Diagrams and Maps.



Multiplying & dividing fractions

$\frac{3}{4} \times \frac{2}{3} = \frac{3}{4}$ group of $\frac{2}{3}$

What to expect:
Multiplying and Dividing Fractions by Integers and Fractions, Calculating with Complex Fractions (H)



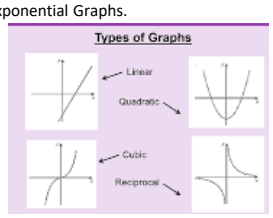
Y9

Summer

Assessment point

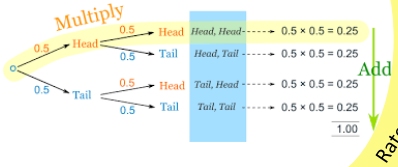
Solving problems using graphs, tables and algebra

What to expect:
Quadratic Functions on Graphs, Reciprocal Graphs, Exponential Graphs.



Probability

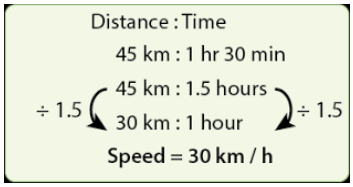
What to expect:
Probability Scale, Sample Space Diagrams, Venn Diagrams, Tree Diagrams



May Half term

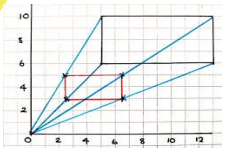
Rates

What to expect:
Compound Units, Metric Unit Conversions



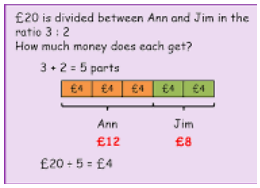
Enlargement & similarity

What to expect:
Enlargement With and Without Coordinate Grids. Angle Rules in Congruent Shapes.



Solving ratio & proportion problems

What to expect:
Divide into a Ratio, Express Values in a Ratio, Direct and Inverse Proportion, Compound Units

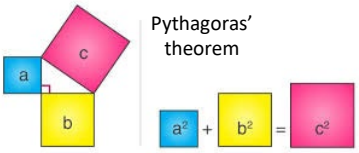


Easter

Assessment point

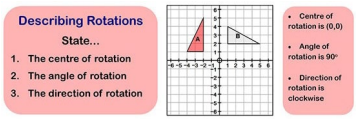
Pythagoras' theorem

What to expect:
Calculating Lengths of Right Angles Triangles, Pythagoras in Context.



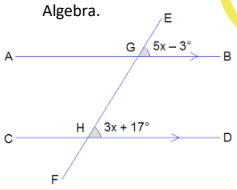
Rotation & Translation

What to expect:
Symmetry, Rotation, Translations.



Deduction

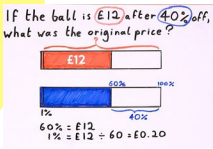
What to expect:
Chains of Reasoning with Angles, Geometric Conjectures, Angles and Algebra.



Feb Half term

Maths & money

What to expect:
Percentages, Reverse Percentages, Wages and Tax Brackets. Repeated Percentage Change



Numbers

What to expect:
Real and irrational numbers, decimals, HCF and LCM, Standard form. .

Using Percentages

What to expect:
Estimating, Error Intervals, Fractions, Standard Form, Reciprocals

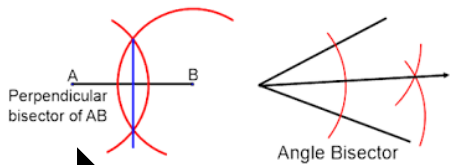
Fraction	Reciprocal
$\frac{9}{7}$	$\frac{7}{9}$
$\frac{1}{2}$	2 when the denominator = 1, it is omitted.
$\frac{a}{b}$	$\frac{b}{a}$

Xmas

Assessment point

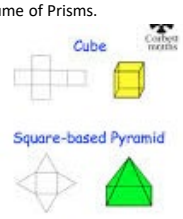
Constructions & congruency

What to expect:
Intro into Loci, Creating Perpendiculars, Rules of Congruence.



Three dimensional shapes

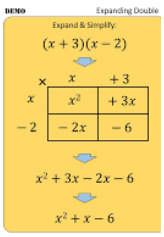
What to expect:
Understand 3-Dimensions, Nets and Diagrams, Surface Area, Volume of Prisms.



Oct Half term

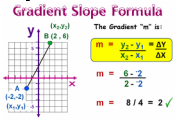
Testing conjectures

What to expect:
Properties of Number, Proofs, Expanding Brackets, Expanding Double Brackets



September

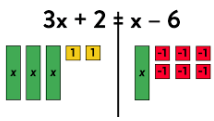
Straight line graphs



What to expect:
Lines Parallel to the axes, Identify Gradient and Intercepts, Link Knowledge of Equations and Lines

Forming & solving equations

What to expect:
Solving Equations and Inequalities, Inequalities with Negative Numbers, Inequalities and Equations with Unknowns on Both Sides, Rearranging Formulae



Y10

Summer

Assessment point

Indices & roots

What to expect:
Square and Cube Numbers, Estimate Powers and Roots (H) Calculate Roots and Indices, Fractional Indices (H), Calculate in Standard Form, Laws of Indices, Simplifying Expressions

$9^5 \div 9^2 = 9^3$

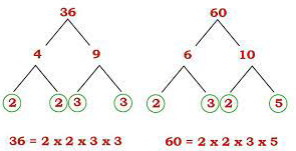
$4^6 \div 4^4 = 4^2$

$3^5 \div 3^{-7} = 3^{12}$

What do you notice?

Types of number & sequences

What to expect:
Factors, Multiples, Primes, LCM, HCF, Describe and Continue Sequences, Fibonacci Sequence, Linear Nth Term, Quadratic Nth Term (H)



36 = 2 x 2 x 3 x 3

60 = 2 x 2 x 3 x 5

May Half term

Non-calculator methods

$$\frac{1}{\sqrt{2}} \times \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

Collecting, representing & interpreting data

Easter

Assessment point

What to expect:
Understand Discrete, Continuous and Grouped Data, Charts, Table and Diagrams, Calculating Averages, Spread, Range and Outliers, Time Series, Histograms (H) Cumulative Frequency Curves (H), Box Plots (H), Quartiles (H)

Number of marks	Frequency	Mid-point	Frequency × Mid-point
0 - 9	3	$\frac{0+9}{2} = 4.5$	$3 \times 4.5 = 13.5$
10 - 19	7	$\frac{10+19}{2} = 14.5$	$7 \times 14.5 = 101.5$
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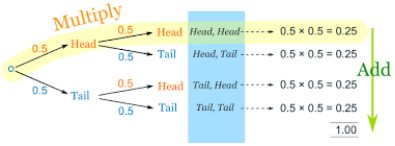
30 - 39	6	$\frac{30+39}{2} = 34.5$	$6 \times 34.5 = 207$
	n = 25		Total = 542.5

What to expect:
Surds (H), Calculations with Pi, Rationalise the Denominator (H), Rounding, Truncating, Lower and Upper Bounds

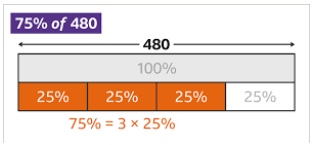
Probability

What to expect:
Predicting Outcomes, Understand Bias, Independent and Conditional Events, Tree Diagrams.



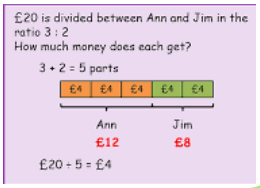
Percentages & interest

What to expect:
Percentage of Amounts, Percentage Change, Simple Interest, Growth and Decay including Compound Interest.



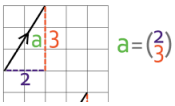
Ratio & Fractions

What to expect:
Simplify Ratio, Dividing into a Ratio, Compound Units, Lengths, Area and Volume with Ratios.



Feb Half term

Vectors



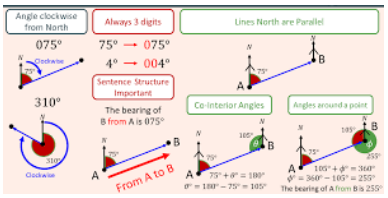
What to expect:
Translation Vectors, Addition and Subtraction of Vectors, Parallel Vectors. Collinear Points

Angles & bearings

Xmas

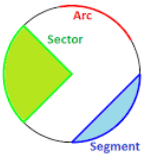
Assessment point

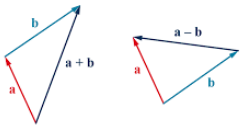
What to expect:
Bearings, Pythagoras and Trigonometry with Bearings



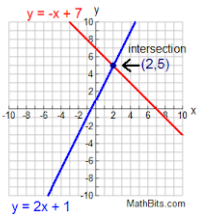
Working with Circles

What to expect:
Properties of a Circle, Parts of Circles, Surface Area and Volume of Spheres, Pyramids, Cones and Composite Solids, Circle Theorems

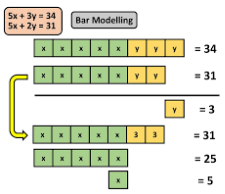




Simultaneous equations

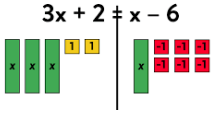


What to expect:
Solving Linear Simultaneous Equations, Quadratic Simultaneous Equations (H)



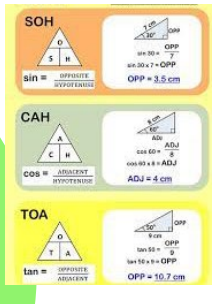
Representing solutions of equations & inequalities

What to expect:
Formulae, Derive Equations, Solve Equations, Interpret Solutions, Factorise Quadratic Equations (H), Solve Quadratic Equations (H) Solve Inequalities. Quadratic Inequalities (H)



Oct Half term

Trigonometry

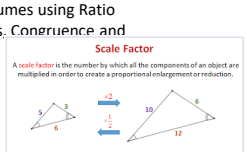


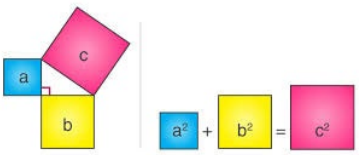
What to expect:
Trigonometric Ratios, Pythagoras Theorem, Exact Values on Sin Θ, Cos Θ and Tan Θ, Cosine and Sine Rule (H).

September

Congruence, similarity & enlargement

What to expect:
Compare Lengths, Areas and Volumes using Ratio Notations, Interpret Scale Factors, Congruence and Similarity, Counter Examples.





Summer

Y11

May Half term

EXTERNAL EXAMS START

Write your name here
Surname | Other names
Pearson Edexcel
Level 1/Level 2 GCSE (9-1)
Centre Number | Candidate Number
Mathematics
Paper 3 (Calculator)

Revision and reteaching of identified weaker areas.

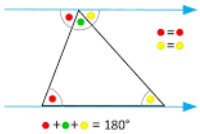
Mock Paper Feedback

Easter

Y11 MOCK SET 2

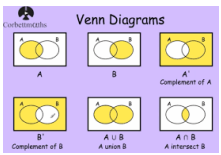
Show that...

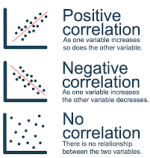
What to expect:
Applying all contexts of maths to questions requiring you to use maths to 'show something' is true.



Listing & describing

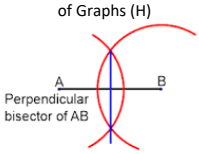
What to expect:
Organised Lists, Sample Spaces, Product Rule (H), Venn Diagrams, Plans and Elevations, Compare Distributions, Scatter Diagrams

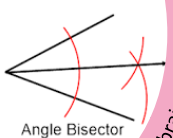




Transforming & constructing

What to expect:
The 4 transformations, Invariant Points and Lines (H), Constructions, Loci, Trig Graphs (H), Translations and Reflections of Graphs (H)

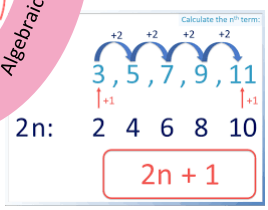




Feb Half term

Algebraic Reasoning

What to expect:
Simplify Expressions, Linear Nth Term, Quadratic Nth Term (H), Sequences, Simultaneous Equations, Proof (H), Inequalities in Two Variables (H)



Xmas

Mock Paper Feedback

Multiplicative Reasoning

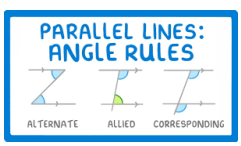
What to expect:
Scale Factors, Direct and Inverse Proportion, Direct and Inverse Proportion Equations (H), Pressure and Density,

men	→	days
10	→	4
1	→	$10 \times 4 = 40$
8	→	$\frac{40}{8} = 5$

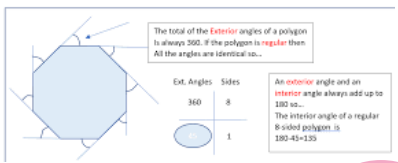
It takes 5 days for 8 men to dig the trench.
Note: 8 men take longer than 10 men.

Geometric Reasoning

What to expect:
Angles at Points, Angles on Parallel Line and Shapes, Exterior and Interior Angles, Vectors, Circle Theorems (H)

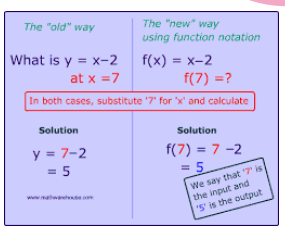


Angles in a regular polygon



Y11 MOCK SET 1

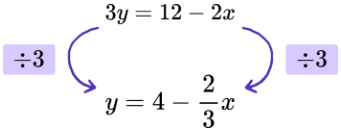
Functions



What to expect:
Function Machines, Substitution, Function Notation, Composite Functions (H), Inverse Functions (H), Quadratic Functions and Inequalities (H), Trigonometric Functions,

Changing the subject

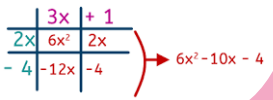
What to expect:
Equations and Inequalities inc Shapes, Change the Subject, Known Formula, Complex Formula, Iteration (H)



Expanding & Factorising

What to expect:
Expand a Factorise Single and Double Brackets, Solve Equations by Factorising, Complete the Square (H), Quadratic Formula (H)

$(2x - 4)(3x + 1)$



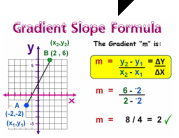
Oct Half term

Using graphs

What to expect:
Reflecting Shapes, Conversion Graphs, Real-Life Graphs, Distance Time Graphs, Speed/Time Graphs, Estimate the Area Under a Curve (H)

September

Gradients & lines



What to expect:
Equations of Lines Parallel to the Axis, Plot Straight Lines, y=mx+c, Equation of a Straight Line, Equation Given Two Points, Simultaneous Equations, Perpendicular Lines (H)

Non linear Graphs

What to expect:
Plot and Read Quadratic/ Cubic/Reciprocal Graphs, Recognise Graph Shapes, Interpret Quadratic Graphs. Exponential Graphs (H), Equation of a Circle (H), Equation of a Tangent (H)