Junior Cert ordinary Level Checklists

Chapter 1 Number

Can I:
- List the factors of a number ☐
- Find the HCF ☐
- List the multiples of a number ☐
- Find the LCM ☐
- List the Prime numbers between 1 and 20 ☐
- Find prime factors of numbers ☐
- Apply BIMDAS ☐

Chapter 2: Algebraic Expressions

Can I:
- Add like terms ☐
- Subtract like terms ☐
- Multiply brackets using multiplication boxes ☐
- Multiply back-to-back brackets ☐
- Evaluate expressions when given a value for the unknown ☐
- Solve linear equations ☐
- Form an equation from words ☐
- Divide a quadratic by a linear ☐

Chapter 3: Sets

Can I:
- List the elements of a set ☐
- Identify the Union of two sets (A U B) ☐
- Identify the intersection of two sets (A u B) ☐
- List the elements of a subset of a set ☐
- List the Universal set, U ☐
- Identify the complement of a set A' ☐
- Identify the cardinal number of a set # ☐
- Identify the difference between sets A\B ☐
- Use venn diagrams to solve problems ☐

Chapter 4 Factors

Can I:
- Factorise algebraic expressions by finding the HCF ☐
- Factorise by grouping terms by using the multiplication boxes ☐
- Factorise by the difference of two squares ☐
- Factorise quadratic expressions ☐

Chapter 5 Arithmetic

Can I:
- Calculate household bills ☐
- Find the percentage of a quantity ☐
- Calculate VAT on an item ☐
- Calculate profit or loss on an item ☐
- Calculate interest earned on an investment ☐
- Calculate a person's income tax ☐
- Convert one currency to another ☐

Chapter 6 Perimeter & Area

Can I:
- Define perimeter ☐
- Find the perimeter of a square ☐
- Find the perimeter of a rectangle ☐
- Define area ☐
- Find the area of a square ☐
- Find the area of a rectangle ☐
- Find the area of a triangle ☐
- Find the area of compound shapes ☐
- Find the area of a parallelogram ☐
- Define volume ☐
- Find the volume of a rectangular solid ☐
- Find the surface area of a rectangular solid ☐
- Draw the net of a solid ☐
- interpret scale drawings ☐

Chapter 7 Statistics 1

Can I:
- Identify categorical data ☐
- Identify numerical data ☐
- Identify discrete numerical data ☐
- Identify continuous numerical data ☐
- Define primary data ☐
- Define secondary data ☐
- Design a questionnaire with appropriate questions ☐
- Identify bias in questions ☐
- Understand the term population in stats ☐
- Understand the term sample in stats ☐

Chapter 8 Probability

Can I:
- List the outcomes of an event ☐
- Apply the Fundamental principle of Counting ☐
- Understand probability is measured on a scale from 0 and 1 ☐
- Draw the probability scale ☐
- Label the probability scale using numbers and words ☐
- Find the probability of equally likely outcomes ☐
- Use sample spaces ☐
- Estimate probability from experiments ☐

Chapter 9 Statistics 2

Can I:
- Define and calculate the mode ☐
- Define and calculate the median ☐
- Define and calculate the mean of a list of numbers ☐
- Calculate the range ☐
- Decide which average best represents the data given ☐
- Calculate the mean of a frequency distribution table ☐
- Calculate the mode of a frequency distribution table ☐

Chapter 10 Geometry 1

Can I:
- Define a line ☐
- Define collinear points ☐
- Define a line segment ☐
- Define a ray ☐
- Define an acute angle ☐
- Define an obtuse angle ☐
- Define a reflex angle ☐
- Define a straight angle ☐
- Identify alternate angles, know alternate angles are equal, look for **Z** ☐
- Identify corresponding angles, know corresponding angles are equal, look for **F** ☐
- Identify interior angles, know interior angles add to 180 degrees, look for **C** ☐
- Define properties of an equilateral triangle ☐
- Define properties of an isosceles triangle ☐
- Define properties of a scalene triangle ☐
- Remember the angles of a triangle add up to 180 degrees
- Identify the exterior angle
- Remember the exterior angle is equal to the sum of the two opposite interior angles
- Define properties of a square ☐
- Define properties of a parallelogram ☐
- Define properties of a rhombus ☐
- Define properties of a rectangle ☐
- Remember the angles of a quadrilateral add up to 360 degrees ☐
- State and apply Pythagoras ☐

Chapter 11 Time

Can I:
- Convert time from 12 hour clock to 24 hour clock ☐
- Convert time from 24 hour clock to 12 hour clock using am and pm ☐
- Add time using degree and minute button on calculator ☐
- Subtract time using degree and minute button on the calculator ☐
- Define distance ☐

- Define speed ☐
- Define time ☐

Chapter 12 Simultaneous equations

Can I:
- Recognise simultaneous equations ☐
- Solve simultaneous equations ☐
- Form simultaneous equations from words ☐

Chapter 13 Quadratic Equations

Can I:
- Solve quadratic equations using multiplication boxes ☐
- Form and solve a quadratic equation from words ☐

Chapter 14 Co-ordinate Geometry of the Line

Can I:
- Plot points on the Cartesian Plane ☐
- Find the distance between two points ☐
- Find the midpoint between two points ☐
- Find the slope of a line given two points ☐
- Find the slope of a line given the equation ☐
- Find the slope of a line from a graph ☐

- Remember parallel lines have equal slopes ☐
- Find the equation of a line given a slope and a point ☐
- Identify where a line cuts the x-axis ☐
- Identify where a line cuts the y-axis ☐
- Verify a point is on a line ☐

Chapter 15 Statistics 3

Can I:
- Draw a line plot ☐
- Interpret data from a line plot ☐
- Draw a bar chart ☐
- Interpret data from a bar chart ☐

- Interpret data from a pie chart ☐
- Draw a stem & leaf diagram ☐
- Interpret a stem & leaf diagram ☐
- Draw a histogram ☐
- Interpret data from a histogram ☐
- Identify what is misleading graphs ☐

Chapter 16 Indices

Can I:
- Apply the laws of indices ☐
- Write numbers in standard form ☐
- Approximate numbers using significant figures ☐

Chapter 17 Circles & Cylinders

Can I:
- Define radius of a circle ☐
- Define chord of a circle ☐
- Find the circumference /length of a circle ☐
- Find the length of an arc of a circle ☐
- Find the area of a circle ☐
- Find the area of a sector of a circle ☐
- Find the volume of a cylinder ☐
- Find the curved surface area of a cylinder ☐
- Find the total surface area of a cylinder ☐

Chapter 18 Triangles & Circles

Can I:
- Identify congruent triangles ☐
- State and apply the properties of congruency, SSS, SAS, ASA, RHS ☐
- Identify similar triangles ☐
- Calculate missing angles ☐

Chapter 19 Patterns & Sequences

Can I:
- Write the term-to-term rule ☐
- Identify repeating patterns ☐
- Define a linear sequence ☐
- Find T_n of a linear sequence ☐
- Graph a linear sequence ☐
- Write a sequence from a diagram ☐
- Define a quadratic sequence ☐
- Find any term in a quadratic equation ☐

Chapter 20 Algebraic Inequalities

Can I:
- Define natural numbers, N ☐
- Define integers, Z ☐
- Define real numbers, R ☐
- Plot numbers on a number line ☐
- Understand > < ☐
- Solve inequalities remembering the inequality sign is reversed when multiplied or divided by a negative number ☐
- Adding algebraic fractions ☐
- Form an equation with algebraic fractions from words ☐

Chapter 21 Functions

Can I:
- Define a function ☐
- Given input, find output ☐
- Given output, given input ☐
- Understand the term domain is the input or x-values ☐
- Understand the term range is the output or y-values ☐
- Draw mapping diagrams ☐
- Understand the term co-domain ☐

Chapter 22 Graphing Functions

Can I:
- Draw graph of a linear function using the calculator ☐
- Draw a graph of a quadratic function ☐
- Interpret data from a linear graph ☐
- Interpret data from a quadratic graph ☐

Chapter 23 Trigonometry

Can I:
- Label a right-angled triangle using hypotenuse, opposite & adjacent ☐
- State & apply Pythagoras ☐
- Understand and apply SohCahToa ☐
- Find the sin, cos or tan of an angle, given the angle, using calculator ☐
- Find the sin, cos or tan of an angle, given the ratio, using $\sin^{-1}$, $\cos^{-1}$, $\tan^{-1}$ ☐
- Find missing sides and angles in triangles ☐
- Solve trigonometric word problems ☐

Chapter 24 Real-life graphs

Can I:
- Interpret data from a graph in the context given ☐
- Identify directly proportional graphs i.e. start at (0,0) ☐
- match graphs with a corresponding vessel ☐

Chapter 25 Geometry 3 Transformations & Constructions

Can I:
- Do my constructions (below) ☐
- Translate an object ☐
- Identify the axis of symmetry in an object ☐
- Understand & apply central symmetry ☐
- Understand & apply symmetry in the x-axis ☐
- Understand & apply symmetry in the y -axis ☐

Constructions- Junior Cert

Lines

1. Bisector of a given angle, using only compass & straight edge ☐

2. Perpendicular bisector of a line segment, using compass & straight edge ☐

3. Line perpendicular to a given line l, passing through a given point on l ☐

4. Line parallel to a given line, through a given point ☐

5. Division of a line segment into three equal segments, without measuring ☐

6. Line segment of a given length on a given ray ☐

7. Angle of a given number of degrees with a given ray as one arm ☐

Triangles

1. Triangle, given lengths of three sides ☐

11. Triangle, given SAS ☐

12. Triangle, given ASA ☐

13. Right-angled triangle, given hypotenuse and one other side ☐

14. Right-angled triangle, given one side and one of the acute angles ☐

15. Rectangle, given side lengths ☐

Theorems

- The angles of a triangle add up to 180 degrees ☐
- The exterior angle of a triangle is equal to the sum of the two interior opposite angles ☐
- The angle in a semi-circle is a right angle ☐

Tips for the exam

- Write in blue or black pen only. Do not write in pencil.
- Bring calculator, one with which you are familiar.
- Do not write outside the given boxes.
- Be familiar with log tables. Know which formulae are in log tables

Calculator

- Know your calculator
- Know how to reset your calculator
- Know how to access the table function on calculator
- Know how to use the degrees & minutes button to calculate time