



1. Number Sense and Operations:

- Operations with integers (positive and negative numbers).
- Order of operations (PEMDAS/BODMAS) for evaluating expressions.
- Prime and composite numbers, factors, and multiples.

Phet Links:

[Arithmetic](#)
[Number Line: Integers](#)

LabXchange Links:

[Last Digits](#)
[Prime Factorizations](#)

2. Fractions, Decimals, and Percentages:

- Operations with fractions and mixed numbers (addition, subtraction, multiplication, division).
- Converting between fractions, decimals, and percentages.
- Solving percentage problems.

Phet Links:

[Build a Fraction](#)
[Fraction Matcher](#)
[Fractions: Intro](#)
[Fractions: Mixed Numbers](#)
[Area Model Decimals](#)

LabXchange Links:

[Probability](#)
[Sets & Venn Diagrams](#)

3. Measurement:

- Converting between different units of measurement (e.g., metric to imperial units).
- Perimeter, area, and volume calculations for various shapes.
- Time and distance problems involving speed and rates.

Phet Links:

[Area Builder](#)
[The Moving Man](#)

LabXchange Links:

[Time, Speed & Distance](#)
[Coordinates & Equations](#)

4. Geometry:

- Properties of 2D shapes (e.g., triangles, quadrilaterals).
- Calculating angles in polygons and parallel lines.
- Volume and surface area of 3D shapes (e.g., prisms, cylinders).

Phet Links:

[Area Builder](#)
[Quadrilateral](#)

LabXchange Links:

[Pythagoras' Theorem](#)
[Coordinates & Equations](#)

5. Data and Statistics:

- Probability concepts and calculations.
- Analyzing and interpreting data from tables and charts.
- Measures of central tendency and dispersion (mean, median, mode, range).

Phet Links:

[Plinko Probability](#)
[Mean: Share and Balance](#)

LabXchange Links:

[Introduction to Statistics](#)
[Data Visualization](#)

6. Algebra:

- Solving equations with one variable.
- Simplifying algebraic expressions and combining like terms.
- Graphing linear equations.

Phet Links:

[Equality Explorer](#)
[Equality Explorer: Basics](#)
[Expression Exchange](#)
[Graphing Lines](#)

LabXchange Links:

[Coordinates & Equations](#)
[Quadratic Equations](#)

7. Ratios, Proportions, and Rates:

- Solving problems involving ratios and proportions.
- Understanding rates and unit rates.

Phet Links:

[Ratio and Proportion](#)
[Unit Rates](#)

LabXchange Links:

[Sets & Venn Diagrams](#)
[Probability](#)

8. Word Problems and Real-Life Applications:

- Complex word problems involving multiple concepts and operations.
- Applying mathematical skills to real-life scenarios.

Phet Links:

[Projectile Motion](#)
[The Moving Man](#)

LabXchange Links:

[Reasoning, Planning and Solving Problems](#)
[Time, Speed & Distance](#)