**Lesson Plan: Linear Equations**

**Troy**

**Objectives:**

Solve simple equations with the same variables on both sides involving 2 operations.

Solve and frame complex word problems.

**Prior Knowledge:**

All four Integer operations (including fractions).

Linear equations in one variable on one side.

**Teacher’s Activity:**

* Review all four arithmetic operations using integers, fractions and decimals (exclude division of decimals). Work sheet to be given and discussed.
* Review simple linear equations in one variable on one side with the help of a worksheet.
* Extend prior of solving simple equations to equations having variables on both sides. Work to be given as worksheet having direct equations.
* Solve word problems.

**References:**

Class 8 NCERT textbook and assorted worksheets.

Challenging work: Assorted worksheets with complex word problems.

Remedial work: Worksheets appropriate to child’s comfort level or claa6/7 NCERT textbook.

**Lesson Plan: Exponents**

**Troy**

**Objectives:**

Define Exponents.

State the laws of exponents.

Express numbers in the exponential form.

Using exponents to express very large and very small numbers.

**Prior Knowledge:**

Reading and writing numbers up to 10 crores/ billions.

**Teacher’s Activity:**

* Read a story from Math- twist book on large numbers. Discuss about real life encounters of large numbers. Give examples of population, radius of Earth, distance between countries. Lead the discussion to the distance between earth and moon; earth and sun etc. Introduce speed of light and light years. Discuss about microscopic lengths.
* Introduce exponential notation and solve questions from class 7 NCERT textbook.
* Explain laws of exponents:
* Multiplying powers with the same base. Dividing powers with the same base.
* Taking power of a power.
* Multiplying powers with the same exponents. Dividing powers with the same exponents.
* Numbers with exponent zero. Numbers with negative exponents.
* Solve questions using all the laws.

**References:**

Class 7 and 8 NCERT textbook and assorted worksheets.

Challenging work: Assorted worksheets with complex word problems.

Remedial work: Worksheets appropriate to child’s comfort level.

**Lesson Plan: Squares and Square Roots**

**Troy**

**Objectives:**

Identify the square of a number.

Find the square root of a number by the method of elimination.

**Prior Knowledge:**

Knowledge about exponents.

**Teacher’s Activity:**

* Read a story from Math- twist book on squares of a number. Discuss about real life encounters of square numbers. Talk about the term’s square feet, square yard etc. Find the squares of some numbers.
* Introduce square root of a number. Find the square root of a perfect squares (till 900).
* Find the square roots of numbers by elimination. Solve questions. Give worksheet as HW.

**References:**

Class 8 NCERT textbook and assorted worksheets.

Challenging work: Assorted worksheets with complex word problems.

Remedial work: Worksheets appropriate to student’s comfort level.