

Lab Framework

Text: CORD

Unit number and title: 14: Solving problems with roots and powers

Short Description: Students will receive a note card with a number on it. Example: one student will have a 3, and another will have a 36. They need to figure out that they match as a cubed number. They are to find their partner that has the square or cube of their number. This is a good way to partner students up for other labs.

Developed by: Kim Schneider

Contact Information: kschneider@psd1.org

Date: June 25, 2008

Lab Title

Unit 14: Find your perfect match

LAB PLAN

TEACHER: Teacher Prep/ Lesson Plan

- **Lab Objective**

To reinforce knowledge of numbers expressed as roots, powers, and cubes without calculators.

- **Statement of pre-requisite skills needed** (i.e., vocabulary, measurement techniques, formulas, etc.)

Multiplication, vocabulary, negative vs. positive integers

- **Vocabulary**

Square root, radical, exponents, powers, cube

- **Materials List**

Note cards-these can be 3x5 cards cut in half or leave them big, zip lock bag to store note cards.

- **GLEs (State Standards) addressed**

Math:

1.5	Understand and apply concepts and procedures from algebraic sense
-----	---

- **SCAN Skills/Workplace Skills**

C. Makes reasonable estimates of arithmetic results without a calculator

- **Set-up information**

Hand out note cards randomly to students as they come into class. Do not explain what the purpose is until everyone has a card.

- **Lab organization**(-Grouping/leadership opportunities/cooperative learning expectations; -**Timeline required**)

1 hour of prep time to come up with paired numbers and write them on note cards. 15 minutes of class time for actual activity. Set a time limit-if less than 15 minutes is wanted, make it for 10 or another time of your choice.

- **Teacher Assessment of student learning** (scoring guide, rubric)

Students are able to partner up with the correct person who completes their problem.

- **Summary of learning** (to be finished after student completes lab)

- discuss real world application of learning from lab

- opportunity for students to share/present learning

- Was there anyone who struggled to find their match?

- Was there more than one possibility for a match that was confusing?

- **Optional activities**

Same concept except you will replace the number with an actual equation and the students have to match up with the student that has the answer to their equation.

This can be used as an entry task, or as a way to partner students up for another activity.

Washington

Applied

Math

Council

<https://wa-appliedmath.org/>

LAB TITLE: Unit 14 Find your perfect match

STUDENT INSTRUCTIONS:

- **Statement of problem addressed by lab**
Your objective is to find the partner to your expression or answer.
- **Procedures** – steps to follow/instructions
Take the note card from your teacher. Look at your expression or answer. What is the solution or expression that matches? Find the person that has your match. If you see others struggling, help them.
- **Assessment instructions** (peer-teacher)
Teacher observation-did everyone get partnered up correctly? Was there any one that struggled? Go over those equations that might have given student trouble.

Washington
Applied
Math
Council

<https://wa-appliedmath.org/>

Lab Data Collection

Student: _____ Date: _____

Unit: _____

Lab Title:

Criteria: Write the problem/objective in statement form

Data Collection: Record the collected/given data

Calculations: Complete the given calculations to solve for an answer(s)

Summary Statement:

Other Assessment(s)

<https://wa-appliedmath.org/>