Meeting 7  Winter 2018

Contigo Fractions
February 21st

Contents

1) Contigo Game
2) Contigo Fractions Game

www.math.uci.edu/mathceo
Meeting 7
Review Session

Tue., Feb 20th
1:30 - 2:30 PM
Rowland Hall 340P

If this time does not work, please email Lucy Dolmadjian: ldolmadj@uci.edu
About MATH CEO

UC Irvine Math CEO program is committed to offering free enrichment activities in mathematics for middle school students in underserved communities, and creating free educational material to be used in classrooms around the world. An essential goal of our program is to encourage students in low income, minority communities in Southern California to pursue a college degree in Mathematics, Science or related fields through a solid foundation and adequate planning.

Our Goals

Inspire and support the interest in mathematics of middle school students from nearby communities who might not otherwise have access to math enrichment activities.

Impart the mathematical foundations and critical thinking skills required for students to successfully pursue a college education and a career in STEM areas.

Instill the desire in these young achievers and their families for a college education and share college access information and financial aid opportunities.

Math CEO Facebook Page
https://www.facebook.com/UCIMathCEO

Math CEO YouTube Channel
https://www.youtube.com/channel/UCvMQNFT-hPf-xKsNixhzYXw

2018 UCI MATH CEO COMMUNITY EDUCATIONAL OUTREACH. UNIVERSITY OF CALIFORNIA AT IRVINE
Identify the Leader mentor

Write names of any new mentors and students
(find form inside folder, write new names if needed)

Place check-marks in the Meeting 7 column (same form inside folder)

Tell math goals to students in each activity

Call students by name

Keep students silence while doing the Bonus Round (Quiz)

Keep your table neat and clean at all times

Get help if there are behavior problems before they escalate

Bonus Round: Group Quiz (pink) (end of Activity 2): 7 min + 3 min correction

Student Survey (pink) (start survey at 3:35 PM)

Fill Meeting Report (blue) (if you are the Leader)

Put back into folder: Student Surveys (pink), Meeting Report (blue)
Dear Mentor

In this meeting we will return to Contigo game from Meeting 6, in which students have to generate expressions from numbers rolled, to score points. Doing so, it helps them develop algebraic thinking as they can look for many different expressions. We offer two versions: the same version as in last meeting (with an extra rule called Freebie modifiers), and a Contigo fractions game.

We recommend you all start from the first version, as a warm up, because there could be new students. As a mentor, you may decide when and whether to switch to the fraction version. If your students seem to have fully understood the original game and they are up for the Fractions Challenge, then we recommend to play also Contigo Fractions Version.

To see explanatory videos, please visit this link.

Math Goals

- **U**
  - Kids understand what an expression is and can create different expressions using basic operations.

- **Sum**
  - Kids can generate an algebraic expression and plug different inputs to obtain different values when evaluating.

- **U**
  - Kids recognize when two fractions are equivalent and can simplify a fraction to its most reduced form.
MATERIALS & AGENDA

INSTRUCTOR MANUAL
Green color

STUDENT WORKBOOK
White color
One per student

MEETING REPORT
Blue color
One per table

Online meeting report

STUDENT SURVEYS
(PERQUIVES)
Pink Color
One per student

WHITEBOARDS
One per student

DRY ERASE MARKERS
A pouch with several

2:10 pm  Introduction

2:15 pm  Career Invitation
  Biology, Vet

2:25 pm  1) Contigo
  Developing number sense

2:55 pm  2) Contigo Fractions
  A game of mental choices

3:25 pm  Bonus Round (Quiz)

3:35 pm  Student Survey

3:40 pm  End of the meeting
**MATERIALS**

**INSTRUCTOR MANUAL**
Green color  
(No student Booklet)

**MEETING REPORT**
Blue color  
One per table

Online meeting report

**STUDENT SURVEYS (INCLUDES QUIZZES)**
Pink Color  
One per student

**WHITEBOARDS**
One per student

**DRY ERASE MARKERS**
A pouch with several

**IMPORTANT!**
Please count the number of markers in the pouch. Ask the students to return them to the pouches when they’re finished. Make sure that at the end, no kid takes any markers home.

**AGENDA**

**2:10 pm**  
Introduction

**2:15 pm**  
1) Contigo game  
   Developing Number Sense

**2:45 pm**  
Career Invitation  
   Biology, Vet

**2:55 pm**  
2) Contigo Fractions  
   Making sense of fractions visually

**3:25 pm**  
Bonus Round (Quiz)

**3:35 pm**  
Student Survey

**3:40 pm**  
End of the meeting
INDIVIDUAL ASSESSMENT

- Right after Activity 2 (Contigo Fractions), there is time for a group Quiz called Bonus Round (to be done as a group in this meeting). Give students 7 minutes to do the problem and have them answer (in their surveys).
  - Give first 3 minutes for individual work, and then let them cooperate for 4 minutes. Students may work in pairs, groups of 3 or all together. Students can change their answers during this time.
  - After collecting answers, grade them and quickly correct them with the kids (3 minutes).

TIPS

- Build the habit of having students work during the first 5 minutes in complete silence and without any help of peers of mentors.

BEHAVIOR EXPECTATIONS

If a kid is behaving improperly or disrupting students, or does not follow directions at all, talk to them. If problem persists or is really serious, please let Brandi, Alessandra, Li-Sheng or an Assistant know immediately.
UCI MATH CEO MEETINGS: BASIC GUIDELINES FOR MENTORS

1. **KNOW YOUR STUDENTS**
   - Call students by their names most of the time: make sure they know your name, talk briefly about their day before you start the math activities.

2. **ASK FOR EXPLANATIONS**
   - Ask students how they got their answers. Say things like “How do you know?”, “Why?”, “Draw a picture”, “Convince me!”, “Can you explain to Juan?”, etc.

3. **MOVE & MONITOR**
   - Move around your table; monitor all students; use an adequate tone of voice; encourage kids to work in teams.

4. **CHECK WORK**
   - Verify that the students write the answers to the problems and that they are correct and complete.

5. **AT THE END**
   - Ask students to fill out the survey individually (no help), and to help pick up trash from the table and floor.

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**TEACHING TIPS**

This icon refers to specific tips which you will find embedded in the booklet activities: procedures, questions to ask to the students, recommended methodologies, and so on.

- **Example**: After you introduce a new concept, it is a good idea to ask students to rephrase the concept, explain it in their own words. You can choose particular students, for example those who are disengaged.

- **Example**: It is convenient to ask one student to read out instructions for a problem or definitions of a concept. This keeps your group focused on the task and improves their reading skills if you give feedback on reading.

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This icon means that the students should work individually in the corresponding problem, before discussing. Be flexible and adapt to your situation.

- **Activity to be done in pairs**

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Note: if not specified, the booklet problem can be done as a group activity involving a discussion.
Contigo Game

Our Goals:
To understand how to create mathematical expressions using parentheses
To develop mental math skills and become familiar with basic calculations

This is the same activity and game as in meeting 6. All previous rules apply, and there is a new rule, called “Freebie Modifiers”:

Freebie modifiers:
In each round, after a student creates a number, he may choose to modify it by performing exactly one of the following Freebie modifiers:

#1) Double it,
#2) Half of it,
#3) Add 1 to it.

For example, if María created the number 8 (as $8 = 3 \times 3 - 1$), and the “8” box is already full, she may choose to use the “double” freebie and double the number, to obtain 16. If the “16” box is unchecked, María then checks that box, scoring the corresponding number of points.

A player may use as many freebies as he wants during the game, but only one in each turn, and only after he has created the value using the dice.
1) CONTIGO GAME

Material
- 3 dice
- 1 Game Board per player (includes array, dice rolls, and scoring)

Introduction

The game of Contigo (or Contig) is a simple but powerful mathematics game of numerical calculations.

This game develops mental math skills and numerical sense in your students. The goal is to form mathematical expressions using numbers given by dice rolls, and collect points. The scoring rules of the game force players to try several options.

Game board

Each student receives its own game board. This includes the following elements:

- A rectangular array of values 1-25 to cross out.
- A list of 25 dice rolls to write: dice values, expression, and value.
- A scoring space, where students add up their scores.
1) CONTIGO GAME

Rules

The game has 25 turns, each consisting on the following:

1. 3 dice are rolled by a student (each time designate a new student to be the dice roller).

2. All students make a numerical expression using the numbers rolled, and the basic operations +, −, x, ÷ and parenthesis. They can use the numbers in any order. **and MUST USE ALL 3 VALUES.** They evaluate the expression

3. Each player can use, if he wants, one of the “Freebies” (double it, half of it or add 1 to it) to modify the previous result. Some examples:
   - 3 --- double it ---> 6,  * 42 --- half of it ---> 21
   - 11 --- add 1 to it ---> 13

4. Players mark with an X the corresponding number box.

5. Players score points as follows:
   - If the X touches the side of a box that already has an X, players get points equal to the number of the box it touches. If the X touches multiple side boxes, add these values.
   - If the X touches the corner of a box with an X, the player does not receive any points for these boxes.

6. Once a box has an X, a player cannot use the number again. So it is possible that players have to pass in one turn (thus getting zero points).

Example 1

The numbers 5, 4 and 6 are rolled and Camila, who has already placed three X’s in the board, constructs the value 26 as follows:

\[ 5 \times 6 - 4 = 26. \]

She decides to use the “Half of it” freebie, so she obtains 13 (half of 26). She then marks the 13 with an X.

Camila receives 8+14 = 22 points for this turn, as the “8” and “14” boxes are marked and touch the sides of the “13” box. Note that Camila does not get an additional 17 points since the “17” box touches the corner and not the side of the “13” box. Camila will add 22 to her accumulated score so far.

Notes and tips

- The rules imply that in Roll #1 players always score 0 points, simply because there are no previous marked boxes.
When a student rolls the dice, he is not the only one creating an expression. Everyone will use these 3 values to create an expression.

Freebie modifiers cannot be applied to single dice rolls. A freebie modifier has to be applied after the expression has been built and evaluated.

Players can use any number of freebies, but only at most one per turn (dice roll).

Players can use a freebie modifier regardless of whether the corresponding box is marked or not before the modification.

It is perfectly ok that repeated numbers are rolled. For example, a student might roll 1, 2, 2 or even 5, 5, 5, and students can still construct different expressions. For example, with 1, 2, 2, a student can construct \((1 \times 2) \times 2 = 4\), or \((2-2) + 1 = 1\).

Students must do their work on their whiteboards and then record it on their own game board.

Remember that to make the game fun for the kids, the mentor does not roll the dice. A student rolls the dice and calls out the 3 numbers. Each student creates its own expression. Then the dice is passed clockwise or counterclockwise to the next student.

**Raffle tickets**

When a student reaches 100 points, he raises his hand and will receive 1 raffle ticket. He will also receive 1 raffle ticket for 200 points, 300 points, 400 points, etc.

**Game end**

The game ends after 25 rolls. Towards the end it might be hard to make a numerical expression for the boxes that are still open. For example, suppose that a student rolls 1, 2, 3. One student only has box 24 open. He will not be able to make 24, and so he must pass. However, another student might have a 9 open. He will be able to make \(3 \times (1+2)\).
1) CONTIGO GAME

A contigo turn:

1. A player rolls 3 dice (say 2, 2, 5). All players write these values.

Then, each player uses its own game board to do the following:

2. Construct an expression (must use all values) and evaluate.

3. Use one freebie modifier to change the value (optional).

3. Evaluate it and write the result.

4. Cross off the number (or pass if number is marked).

5. Score points.

http://mathforum.org/ruth/four4s.puzzle.html

A contigo turn:

2   2    5
(2+5) x 2  14
An example:

In the illustrated example, we look at a specific player’s game board and how he starts to fill out his array, based on the dice rolls of the mentors. Notice how after each roll, the student does the following, using the values obtained:

**CONSTRUCT AN EXPRESSION**

**EVALUATE IT**

**APPLY 1 FREEBIE MODIFIER**

(OPTIONAL)

**WRITE THE NUMBER**

**CROSS OFF THE NUMBER**

(Box must be non-crossed)

**WRITE THE SCORE**

**ADD FOR CURRENT SUBTOTAL**
1) Contigo Game

Teaching Tips

1. One student rolls the dice. Everybody records the numbers and makes their own numerical expression. Have students write the expression and answer on the whiteboard so you can check. Then the students write it on their game board and record their points.

2. The students must write down the points and add after each roll. If their answer box touches the side of 2 or more boxes, have the students write down the points for each touching box and then add.

3. Students take turns rolling the dice.

4. In each round, after a student creates a number, he may choose to modify it by performing exactly one of the following Freebie modifiers:
   * Double it
   * Half of it
   * Add 1 to it

4. If the roll for Roll Number 1 is 1,3,4 and the roll for, say, Roll Number 5 is 1,3,4 again, the roll is valid even though the numbers are the same. As we know, there are many numerical expressions that can be made with the same 3 numbers. Students must create a different expression for this roll, of course, because they want to cross a different number than the one marked in roll Number 1.

5. Raffle Tickets
   - 100 points - 1 raffle ticket
   - 200 points - 2 raffle tickets
   - 300 points - 3 raffle tickets
Contigo Fractions

Our Goals:
To understand how to create mathematical expressions using parentheses
To develop mental math skills and become familiar with basic calculations

The “Contigo Fractions” game is very similar to the original Contigo game played before, but naturally it includes some goals related to fractions, such as:

Students can add different fractions,
Students can find common denominator for fractions,
Students understand the role of the integer part of a fraction (such as 2 in 9/4) and can use it for adding fractions.

Main Differences between Contigo Fractions and the original Contigo (played in Meeting 6):
We list some important features of Contigo Fraction:

- **New Board**: The board is a new one, which includes fractions (including some integers)
- **4 dice**: Now, 4 dice are used. Students use 3 or 4 of them to create an expression using +, -, x or /.
- **Freebie Modifiers**: In each round, after a student creates a number, he may choose to modify it by performing exactly one of the following Freebie modifiers:
  #1) Double it,
  #2) Half of it,
  #3) Add 1 to it.
1) CONTIGO GAME

**Material**
- 4 dice
- 1 Array per player
- 1 Dice roll and scoring sheet per player

**Introduction**

This game is very similar to the original. Here we are interested in students creating fractions and then matching them to fractions in the board that are equivalent. So this is a good practice activity on fraction equivalence.

**Game board**
Each student receives its own game board. This includes the following elements, which are 2 separate pages:

- A rectangular array of fractional values to cross out. Each box has also a location 1-25 (small numbers in corners), which will help in scoring.
- A Sheet with a list of 25 dice rolls to write: dice values, expression and value, and a scoring space, where students add up their scores.
2) CONTIGO FRACTIONS

Rules
The game has 25 turns, each consisting on the following:

1. 4 dice are rolled by a student (each time designate a new student to be the dice roller).
2. Each student creates a numerical expression using the 3 or 4 of the numbers rolled, and the basic operations +, −, x, ÷ and parenthesis. Players can use the numbers in any order. **Players MUST USE AT LEAST 3 VALUES.**
3. Each player evaluates his expression.
4. Each player can use, if he wants, one of the “Freebies” (double it, half of it or add 1 to it) to modify the previous result. Use at most 1 freebie in each turn. Freebies cannot directly modify dice rolls. Some examples:
   - 1/3 --- double it ---> 2/3
   - 3/2 --- half of it -----> 3/4
   - 1/2 --- add 1 to it ---> 3/2
5. Each player marks with an X the corresponding fraction number box in his array. **It is perfectly ok to look for equivalent fractions.** For example, a player that created 5/10 can (and should) mark the “1/2" box. The box cannot be already marked (otherwise the player passes this turn scoring no points).
6. Players score points as follows:
   - If the X touches the side of a box that already has an X, players receive the points equal to the integer number (the one written 4 times in the 4 corners) of the box it touches. This number appears four times in the sides of the box, and it is a value from 1 to 25. If the X touches multiple such side boxes, add those corresponding integers.
   - If the X touches the corner of a box with an X, the player does not receive any points for these boxes.

Once a box has an X, a player cannot use the number again. So it is possible that players have to pass in one turn (thus getting zero points).
Example 1 (see next page also)

The numbers 4, 1, 4 and 6 are rolled and Camila, who has already placed four X’s in the board, decides to use three dice to construct the value 6/8 as follows:

\[
\frac{6}{4 + 4} = \frac{6}{8}.
\]

Since \(\frac{3}{4}\) (which is equivalent to \(\frac{6}{8}\)) is already marked in her board, she decides to use the “Add 1 to it” freebie to modify this value, thus getting \(\frac{6}{8} + 1 = \frac{6}{8} + \frac{8}{8} = \frac{14}{8}\).

She then marks the “7/4” box with an X. She can do this, because she knows (and explains to others) that \(\frac{14}{8}\) is equal to \(\frac{7}{4}\). She knows equivalent fractions!

Camila receives 30 points for this turn, as the boxes corresponding to locations 13 and 17 are marked and touch the sides of the “7/4” box. Remember: for scoring, we do NOT add the fractions in the boxes, but the locations, indicated by small numbers in the corners (locations are 1 to 25, as in the original Contigo).

Note that Camila does not get an additional 17 points, because the box in location 17 touches the corner and not the side of the “13” box. Camila will add 22 to her accumulated score so far.
Camilla has already marked down three $\times$ in locations 8, 13, 14, and 17.

Rolling 4 dice, values 4, 1, 4, and 6 are obtained. She creates the following expression: $(6) / (4+4)$

She evaluates it and simplifies it: $6/8 = 3/4$. (we divided both the numerator and denominator by 2)

The “3/4” box is already marked with an X, so Camilla decides to use the “+1 freebie”, and adds 1 to the value of 3/4: $3/4 + 1 = 3/4 + 4/4 = 7/4$.

Now, Camilla marks an X on the “7/4” box (location 18).

Only locations 17 and 13 will contribute to scoring.

Camilla adds 13 + 17 to her accumulated score.

She obtained 30 points in this round.

Notice that we do NOT add the fractions of the boxes, but the location values (1-25) of the boxes. So the score is always an integer value, as in original Contigo.
Dear mentors:

Dedicate 10 minutes for the Bonus Round Group Quiz.

- Give the first 3 minutes for individual work,
- then give 4 minutes for group work (they solve the quiz together).

(Yellow papers in your Mentor’s folder).

- Then grade, spend 3 minutes for formative assessment (giving feedback so that kids learn from mistakes right away).

Still collect the individual responses.
Take at the end of Activity 2

Using the numbers 4, 3 and 5 (each exactly once), create three different expressions:

- One that is equal to 1/2
- One that is equal to 1/3
- One that is equal to 8.

Justify your choices. Write your work:

Solution (examples):

- \( \frac{4}{3+5} = \frac{4}{8} = \frac{1}{2} \)
- \( \frac{3}{4+5} = \frac{3}{9} = \frac{1}{3} \)
- \((5-3) \times 4 = 2 \times 4 = 8\)
Meeting 7  Additional Resources

(We will have these resources at the meeting in your table)

- Pages 1-23: Instructor Manual
  45 copies, Green (2 per table + extras)

- Page 25-26: Contigo Game Board
  120 copies, 2-sided, 8 per table

- Page 27-28: Contigo Fractions Board
  + Rolls/Scoring
  120 copies, 1-sided pages, NO Staple, 8 per table

- Page 30-31
  - Bonus Round (Quiz) YELLOW
  - Student Survey (PINK)
  120 copies, 1-sided, DO NOT STAPLE, 8 per table

- Pages 33-34: Meeting Report
  20 copies, 2-sided, BLUE, (1 per table + 2 extra)
CONTIGO

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<th>Dice rolls</th>
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Mark the #’s you obtain with an X. You cannot mark a number twice.

**Scoring**

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**FREEBIE MODIFIERS**
(USE AT MOST 1 PER TURN)

#1) **Double it,**
#2) **Half of it,**
#3) **Add 1 to it.**
CONTIGO

Mark the #'s you obtain with an X. You cannot
mark a number twice.

Scoring

Dice rolls     Expression + Freebie    #

#1: [ ][ ][ ] ____________=___ = ____

#2: [ ][ ][ ] ____________=___ = ____

#3: [ ][ ][ ] ____________=___ = ____

#4: [ ][ ][ ] ____________=___ = ____

#5: [ ][ ][ ] ____________=___ = ____

#6: [ ][ ][ ] ____________=___ = ____

#7: [ ][ ][ ] ____________=___ = ____

#8: [ ][ ][ ] ____________=___ = ____

#9: [ ][ ][ ] ____________=___ = ____

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#23: [ ][ ][ ] ____________=___ = ____

#24: [ ][ ][ ] ____________=___ = ____

#25: [ ][ ][ ] ____________=___ = ____

FREEBIE MODIFIERS
(USE AT MOST 1 PER TURN)

#1) Double it,
#2) Half of it,
#3) Add 1 to it.
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<th>Roll #1</th>
<th>Roll #2</th>
<th>Roll #3</th>
<th>Roll #4</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\frac{1}{2})</td>
<td>(\frac{3}{2})</td>
<td>(\frac{5}{2})</td>
<td>(\frac{7}{2})</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>(\frac{1}{3})</td>
<td>(\frac{2}{3})</td>
<td>(\frac{4}{3})</td>
<td>(\frac{5}{3})</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>(\frac{1}{4})</td>
<td>(\frac{2}{4})</td>
<td>(\frac{3}{4})</td>
<td>(\frac{5}{4})</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>(\frac{1}{6})</td>
<td>(\frac{5}{6})</td>
<td>(\frac{7}{6})</td>
<td>(\frac{11}{6})</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>(\frac{1}{12})</td>
<td>(\frac{5}{12})</td>
<td>(\frac{11}{12})</td>
<td>(\frac{1}{12})</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>11</td>
<td>16</td>
</tr>
</tbody>
</table>
In the Game Board (separate page) each entry has a fraction in the center, and the corresponding scoring value 1-25 in the corners. Use these scoring values to score points, exactly as you did in the original contigo. Mark the #’s you obtain with an X. You cannot mark a number twice.

Freebie Modifiers (use at most one each turn):

- **Double it**
  *Example: 2/3 → 4/3*

- **Half of it**
  *Example: 3/2 → 3/4*

- **Add 1 to it**
  *Example: 1/3 → 4/3*

**Scoring**

<table>
<thead>
<tr>
<th>Roll #</th>
<th>Dice Rolls</th>
<th>Expression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll #1:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #2:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #3:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #4:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #5:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #6:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #7:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #8:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #9:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #10:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #11:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #12:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #13:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #14:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #15:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #16:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #17:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #18:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #19:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #20:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #21:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #22:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #23:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #24:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
<tr>
<td>Roll #25:</td>
<td>[ ] [ ] [ ]</td>
<td>____________ = ___</td>
</tr>
</tbody>
</table>
Bonus Round (Quiz) + Student Survey (Pink paper) 120 copies
UCI MATH CEO - WINTER 2018 BONUS ROUND (QUIZ)  
MEETING 7   February 21, 2018

Name: ___________________________      Table: ______

BONUS ROUND

Take at the end of Activity 2

Using the numbers 4, 3 and 5 (each exactly once), create three different expressions:

- One that is equal to 1/2
- One that is equal to 1/3
- One that is equal to 8.

Justify your choices. Write your work:
**UCI MATH CEO STUDENT SURVEY**  
**MEETING 7, FEBRUARY 21, 2018**

**First AND Last Name:** ________________________  ______________________________  **Table Number:** _______  Lathrop (   )  Villa  (   )

<table>
<thead>
<tr>
<th>Questions</th>
<th>Scale from 1 to 5 (Please circle your answers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) How enjoyable were today’s tasks?</td>
<td>1 = not at all enjoyable  2  3 = somewhat enjoyable  4  5 = very enjoyable</td>
</tr>
<tr>
<td>2) How competent did you feel on today’s tasks?</td>
<td>1 = not competent at all  2  3 = somewhat competent  4  5 = very competent</td>
</tr>
<tr>
<td>3) How did you feel while solving today’s tasks?</td>
<td>1 = not pressured at all  2  3 = somewhat pressured  4  5 = very pressured</td>
</tr>
<tr>
<td>4) How important was for you to do well on today’s tasks?</td>
<td>1 = not important at all  2  3 = somewhat important  4  5 = very important</td>
</tr>
<tr>
<td>5) How close do you feel to your mentor at Math CEO?</td>
<td>1 = not close at all  2  3 = somewhat close  4  5 = very close</td>
</tr>
<tr>
<td>6) How close do you feel to your peers at Math CEO?</td>
<td>1 = not close at all  2  3 = somewhat close  4  5 = very close</td>
</tr>
</tbody>
</table>

**Feedback for your mentor:** ____________________________

**3 words to describe Math CEO** ________________________________

**2 THINGS WHICH I LEARNED TODAY**

**2 THINGS THAT I FOUND INTERESTING**

**I QUESTION THAT I STILL HAVE**

---

*Clean your table when you finish, return the dry-erase markers, pick up your trash and take your belongings. Thank your mentor!*

*Thanks for your responses!*
Meetings Report
(Blue paper)
Dear leader mentor,

Please complete this survey about each of the students at your table. Circle the number that better reflects how you feel. We really value your input. THANK YOU for your thoughtful answers, and for your amazing contribution to Math CEO.

STUDENT’S FIRST NAME: ___________________  LAST NAME: ______________________

Compared to his/her peers, how good was this student at solving today’s math activities? 1 (worse) 2 3 (average) 4 5 (a lot better)
How much innate ability or talent in math did this student show today? 1 (not at all) 2 3 (a little) 4 5 (very much)
How much effort did this student put in today’s math activities? 1 (not at all) 2 3 (a little) 4 5 (very much)
How much did this student participate in today’s math activities? 1 (not at all) 2 3 (a little) 4 5 (very much)
How interested was this student in today’s math activities? 1 (not at all) 2 3 (a little) 4 5 (very much)

Note or comments about this student:  ____________________________________________________________________________

STUDENT’S FIRST NAME: ___________________  LAST NAME: ______________________

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Note or comments about this student:  ____________________________________________________________________________
### Student Data

**Comparison to Peers**

- **Math Activity Competence**: 1 (worse) 2 3 (average) 4 5 (a lot better)
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**Note or Comments**

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**Note or Comments**

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**Note or Comments**

_______________________________________________________________________________