Math MATTERS

2014

Participant Handouts

	Multiplication	**Measurement Division**	**Partitive Division**
Grouping and Partitioning	Anita put __ away in her Short Term money jar every week for __ weeks. How much did she have in the jar then? ($9.50, 5) ($11.25, 6)	Anita had ___. She wanted to give several charities ___ each. How many charities could she donate to? ($45.00, $15.00) ($70, $17.50)	Anita had ___ dollars she wanted to divide equally among her ___ money jars. How much should she put in each jar? ($363, 3) ($366, 6)
Rate	Margo worked in a bakery. She could knead a loaf of bread every __ minutes. At that rate, how long would it take her to knead __ loaves of bread? (10, 5) (7, 8)	Margo worked in a bakery. She could knead __ loaves of bread in one hour. At that rate, how long did it take them to knead __ loaf(ves) of bread? (7, 1) (7, 2) (9, 3)	Margo worked in a bakery. She could knead __ loaves of bread in 40 minutes. At that rate, how many loaves could she knead in __ minutes? (8, 5) (5, 20) (4, 30)
Price	Eloy bought 7 pounds of white fish for $2.50 a pound. How much did he pay for the fish?	Eloy paid $21.77 for fish that cost $7 a pound. How many pounds of fish did he buy?	Eloy paid a total of $45 for 15 pounds of shrimp. How much did he pay a pound for the shrimp?
Fractions	Sammy and his 3 friends had each eaten personal sized pizza for lunch. Each had one-sixth of his pizza leftover. If they put their leftovers together, how much pizza would they have?	Sammy wanted to make pizza dough. The recipe called for ½ cup flour per pizza. If Sammy had 5 cups of flour, how many pizzas could he make?	Sammy's recipe for pizza called for 3/4 cup sausage per pizza. If Sammy could make 8 pizzas, how many cups of sausage did he have?

Unit 1 Lesson 2 – Daily Routines – Measurement Lab
One per student

Perimeter Pandemonium (1 of 2) – Measurement Lab Record Sheet

Students should work in small groups (no more than four).

Materials:
- ruler (cm)
- 4 different polygons

Task:
- Write the mathematical name of the polygons you will measure in the left column of the chart below. (Example: scalene triangle, irregular octagon, regular hexagon, etc.)
- Sketch a picture of the polygon you are measuring.
- Record the number of sides.
- Measure side lengths of each polygon to nearest half-centimeter. Use a mixture of decimals and fractions.
- Label corresponding sides on sketch in chart.
- Calculate the perimeter of each polygon.

	draw shape	# of sides	calculate perimeter	perimeter
Shape 1:				
Shape 2:				
Shape 3:				
Shape 4:				

Fraction Action

Materials:
None for this activity

Task:
Tina needed 3.25 cups of flour to make the base of her broccoli cheddar soup. She could only find her $\frac{1}{2}$ cup measuring cup. Draw a picture showing how many scoops of flour she will need to equal the amount the recipe calls for?

X **Marks the Spot**

Solve for *x*.

79.488 + *x* = 460.7

Problem 1:
Fred's Funny Farm is a fun family petting zoo. He didn't have very many animals when he started so it only cost him $378.49 the first month to feed them. The kids who visited loved the bunnies and goats the best. Fred decided to buy a few more of each and it raised his food bill the next month to $455.13. How much did Fred spend on food for the first two months?

- What is the answer to the question? Show your solution strategy.

Problem Solution (Partner #1) Name:	**Solution Verification** (Partner #2) Name:

Problem 2:
His business kept growing so he purchased a few more mini-horses and a family of geese. His food expense went up to $693.18. How much did Fred spend in those three months feeding his animals?

- What do you need from Problem 1 to solve Problem 2?
- Be sure to verify the answer to Problem 1 before solving Problem 2.
- What is the answer to the question? Show your solution strategy.

Problem Solution (Partner #2) Name:	**Solution Verification** (Partner #1) Name:

Problem 3:
Fred's Funny Farm is a fun family petting zoo. He didn't have very many animals when he started so he only needed 375.15 gallons of drinking water the first month. After buying more bunnies and goats he needed 128.06 gallons more than the month before. His business kept growing so he purchased a few more mini-horses and a family of geese. Watering the mini-horses and filling a small pond for the geese meant Fred hauled in 2846.7 gallons of water during the third month. How much water did Fred's Funny Farm use in its first 3 months of business?

Step 1 – Name:	Verification – Name:
Step 2 – Name:	**Verification – Name:**
Final Solution – Name:	**Verification – Name:**

Partner 1 - Problem 4:
Fred charged $8.25 per adult and $4.50 per child to visit the petting zoo. How much would it cost for a mom, dad, and one child to visit Fred's petting zoo?

Problem Solution Name:	Solution Verification Name:

Partner 2 - Problem 5:
Fred charged $8.25 per adult and $4.50 per child to visit the petting zoo. How much would it cost for a grandmother, a grandfather, and one grandchild to visit Fred's petting zoo?

Problem Solution Name:	Solution Verification Name:

Piggy Bank Story Problems

Work with your teacher and peers to answer the following questions. Use the back of this paper or scratch paper if you need more room to work.

- Marinda checked her bank statement online to make sure her calculations matched what the bank posted on the website. The bank said she had $10,420.06 in her account. But, Marinda just spent $203.56 at her favorite boutique, $67.89 at the grocery store for dinner, and paid a bill online that was $42.26. The bank had not posted those transactions yet. How much does Marinda actually have available in her account after the recent purchases?

- Tara and Jason have been staying on their budget for several months. Together they bring home $8,337.24 each month after taxes. $2,549.60 goes straight into the fund to pay bills. $825.00 is put into the personal fund that takes care of holidays, clothing, and entertainment. $2,053.02 is used to pay off car related bills and insurances. Half of the remaining balance will go into savings, and the rest is used to pay off debt. How much money did Tara and Jason deposit into the savings account this month?

- Kyle started selling some of his comic book figurines online to make some extra cash to pay rent. Hurricane Girl sold for $89.42, Super Martian Man topped the bidding war at $247.13, Mr. Titanium brought in $192.00. While managing the biddings he noticed someone was selling Arachnid Boy for $250.00 flat. He bought it quick and was able to turn around and sell it right back for $326.00. If Kyle started with $25.00 in his bank account, will he have the $650.00 he owes for rent after selling his figurines today?

Unit 1 Lesson 1 – Follow-up
One per group

Money Mayhem Game Directions

Materials:
- 6 deca-dice (10-sided dice labeled 0-9)
- 1 coin (with heads and tails)
- **BLM** Money Mayhem Record Sheet

Procedure:
The object of the game is to be the first player to make it to the top of the mountain. You advance on the arrow-led path by correctly creating a similar rectangle using the dimensions provided by a domino and a scale factor determined by the die.

- Player 1 rolls all six deca-dice and arranges them to create a dollar amount up to the thousands place, but not less than the hundreds place (if possible). Each die is used exactly once. Must include two decimal places (tenths, hundredths). Record number.
- Player 2 repeats first step. Record number.
- Player 1 flips coin. Heads = add, Tails = subtract.
- Both players calculate the (addition/subtraction) of the two dollar amounts created by the dice. (Player 2 is calculating to verify Player 1's answer. Use scratch paper for verification work.)
  - *Correct:* Number in the tens-place of the Final Solution equals number of points awarded for work.
  - *Incorrect:* Player receives one point (for effort).
- Play moves to Player 2. Repeat process.
- Highest score when class ends is the winner!

Ex:
Player 1 rolls dice shown in picture.
Arranges to make $6,024.12

1 0 6 4 2 2

Player 2 rolls dice shown in picture.
Arranges to make $8,331.95

9 3 8 5 3 1

Player 1 flips coin.
Heads = addition

Both players find the sum of the two dollar amounts. Player 1 correctly answers $14,356.07.

Number in the tens-place is 5, so Player 1 receives 5 points.

Roles reverse and play continues with Player 2.

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

Money Mayhem Record Sheet

Record work on this handout while playing game.

	Player 1 work	points	**Player 2 work**	points
Turn 1				
Turn 2				
Turn 3				
Turn 4				
Turn 5				
Turn 6				
Turn 7				
Turn 8				
Turn 9				
Turn 10				
Total Points				

Unit 1 Lessons 1-3 – Follow-up
One per student

Recursive Review Problems

Solve the recursive review problems using any strategy of your choice.

Unit 1 Lesson 1
Mallory deposited her $342.89 check in the bank. The new balance said $511.30. How much money did Mallory already have in her account?

Unit 1 Lesson 2
Clarity timed herself running the 400 meter dash during track practice. Her times were 80.46 seconds, 78.3 seconds, 79.16 seconds, and 81.05 seconds. She was keeping a log of her time spent running. What was her total running time for today's track practice?

Unit 1 Lesson 3
If Jenny can fit 13 cupcakes into 1 box, how many boxes will she need to pack 91 cupcakes? Use a ratio table to solve this problem.

Unit 1 Lesson 1 – Snack Fractions
One per student

Apple – Snack Fractions

Divide your snack equally between the two of you. Work with your partner to solve the problems.

1. What fraction represents your portion out of the <u>whole</u>?   _____
    Equivalent decimal?   _____

2. Your little brother wants to share your portion. Using a picture and numbers show what fraction represents your new portion out of the <u>whole</u>?   _____
    Equivalent decimal?   _____

3. What fraction represents your new portion compared to your original <u>portion</u>?

4. How do your fraction answers for questions 2 and 3 relate to one another mathematically? Draw a picture to model the relationship.

5. Oh! Your little brother's twin walked in and wants to share your apple before you cut it. Draw a picture to model how you will divide your original portion to share it with your 2 little brothers.

    Fractional representation of your new portion out of the whole?   _____

6. How does your new portion compare to your original <u>portion</u> and how does it relate to your answer for #5?

Student Record Sheet – Kindergarten Pre/Post Assessments

Student Name

Pre-test ☐   **Post-test** ☐

?	Possible Pt/s	Pt/s Earned	Notes
1	1		
2	1		
3	1		
4a	1		
4b	1		
5	1		
6	1		
7	1		
8	1		
9a	1		
9b	1		
Total Points			

Student Name

Pre-test ☐   **Post-test** ☐

?	Possible Pt/s	Pt/s Earned	Notes
1	1		
2	1		
3	1		
4a	1		
4b	1		
5	1		
6	1		
7	1		
8	1		
9a	1		
9b	1		
Total Points			

Student Name

Pre-test ☐   **Post-test** ☐

?	Possible Pt/s	Pt/s Earned	Notes
1	1		
2	1		
3	1		
4a	1		
4b	1		
5	1		
6	1		
7	1		
8	1		
9a	1		
9b	1		
Total Points			

Student Name

Pre-test ☐   **Post-test** ☐

?	Possible Pt/s	Pt/s Earned	Notes
1	1		
2	1		
3	1		
4a	1		
4b	1		
5	1		
6	1		
7	1		
8	1		
9a	1		
9b	1		
Total Points			

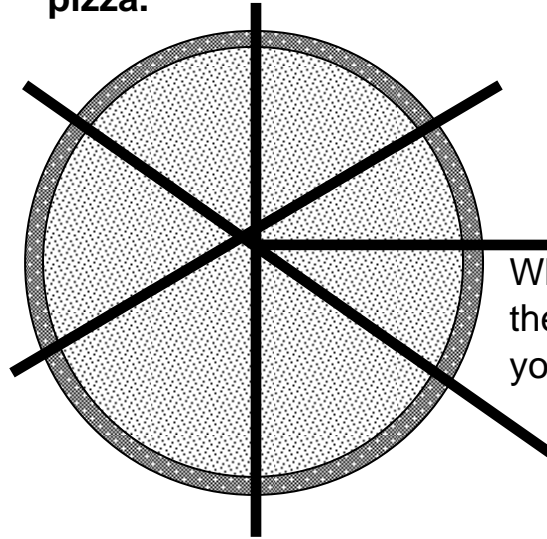|	
☐5a **1 Point Answer** ☐5b **1 Point Strategy**	**5. Roger counted his pennies and found that he had 79 in one piggy bank. He needs 90 pennies. How many more pennies does he need?** **Show your work.** **Answer #1 – He needs 11 pennies.** **Answer #2 – He needs 21 pennies.** **90** **-79** **21**
☐6a **1 Point Answer** ☐6b **1 Point Strategy**	**6. Rosa's big brother bicycled 73 miles last month. He bicycled 39 more miles than Rosa. How many miles did Rosa bicycle last month?** **Show your work.** **Answer #2 She bicycled 34 miles.** **73** **-39** **34** **Answer #3 She bicycled 46 miles.** **73** **-39** **46**

7. You are fair sharing the pizza with yourself and 7 friends. Draw how you will divide the pizza.

What fractional part of the pizza will each of you receive?

Answer #1   We get one seventh.

☐4 **1 Point**	**4. Lizzi ate 0 .55 of the small pizza. Her oldest brother ate 0.33 of another small pizza. Her younger brother ate 0.6 of a small pizza. Write the pizza servings in order from smallest to largest.** **0.6 0.33 0.55**
☐5a **1 Point Answer** ☐5b **1 Point Justification**	**5. Marci has 1 $\frac{5}{8}$ cup of buttermilk. She has two recipes** **for biscuits; one that needs 1 $\frac{3}{4}$ cup; another that needs** **1 $\frac{1}{2}$ cup of buttermilk. Which recipe should she use?** **She should use the 1 ¾ cup.** **Justify your answer.** **Half a cup is only 4/8 cup, so she wouldn't have enough if she used the 1 ½ cup of buttermilk.**

☐2 **1 Point**	1. **Mr. Sanchez bought a bag of seed. He planted 33% of the seeds from the bag, and he still had 12.5 pounds of seed left to plant. How many pounds of seed were in the full bag?** Show your work. **6.25 pounds planted** **6.25 pounds** **6.25 pounds** **12.5 pounds left** **6.25** **Answer: 18.75 pounds in the full bag.** **6.25** **+6.25** **18.75**
☐8 **1 Point**	8. **Elliot's lunch bill was $9.95 including tax. He wants to give the waitress a 15% tip. How much money will he need to pay the bill and leave the tip? Show your work.** **10% of 9.95 = $1.00** **Half of a dollar = .50 (because 5% is half of 10%)** **Tip is $1.50** **9.95** **+1.50** **$11.45 This is his total bill.**