Mental Math

Use with Chapter 1, Mental Math 5C

Name_____**Date**_____

Look at the problem on the left. Before you solve it, look for friendly factors that will make it easier to solve. Write the friendly factors in the order that you will use them on the blanks. Then use mental math to solve each problem.

Problem	Friendly Factors	Product
1. $5 \times 7 \times 2 =$	_____ × _____ × _____	_____
2. $3 \times 5 \times 4 =$	_____ × _____ × _____	_____
3. $9 \times 3 \times 2 =$	_____ × _____ × _____	_____
4. $8 \times 4 \times 2 =$	_____ × _____ × _____	_____
5. $2 \times 7 \times 4 =$	_____ × _____ × _____	_____
6. $8 \times 5 \times 2 =$	_____ × _____ × _____	_____
7. $6 \times 5 \times 4 =$	_____ × _____ × _____	_____
8. $4 \times 4 \times 2 =$	_____ × _____ × _____	_____
9. $3 \times 5 \times 3 =$	_____ × _____ × _____	_____
10. $4 \times 2 \times 6 =$	_____ × _____ × _____	_____
11. $4 \times 6 \times 5 =$	_____ × _____ × _____	_____
12. $3 \times 5 \times 2 =$	_____ × _____ × _____	_____

Mental Math

Use with Chapter 1, Mental Math 5D

Name_____**Date**_____

Look at the problem on the left. Before you solve it, look for friendly factors that will make it easier to solve. Write the friendly factors in the order that you will use them on the blanks. Then use mental math to solve each problem.

Problem	Friendly Factors	Product
1. $5 \times 5 \times 2 =$	_____ × _____ × _____	_____
2. $3 \times 5 \times 6 =$	_____ × _____ × _____	_____
3. $8 \times 3 \times 2 =$	_____ × _____ × _____	_____
4. $5 \times 4 \times 2 =$	_____ × _____ × _____	_____
5. $2 \times 8 \times 5 =$	_____ × _____ × _____	_____
6. $3 \times 6 \times 2 =$	_____ × _____ × _____	_____
7. $8 \times 5 \times 4 =$	_____ × _____ × _____	_____
8. $4 \times 4 \times 5 =$	_____ × _____ × _____	_____
9. $5 \times 5 \times 4 =$	_____ × _____ × _____	_____
10. $5 \times 2 \times 6 =$	_____ × _____ × _____	_____
11. $4 \times 9 \times 5 =$	_____ × _____ × _____	_____
12. $7 \times 5 \times 2 =$	_____ × _____ × _____	_____

Open-ended Question

Use with Chapter 1, Activity 9A

Name_____Date_____

Vito was earning points at the "You Pay Arcade" as he played his favorite games. In a month's time, he had four 100-point coupons, fourteen 10-point coupons, and fifty-four 1-point coupons. In order to win a free CD player, he needs 750 points.

- Tell whether or not he has enough points for the CD player.
- Tell how you know. Be sure to show your work and support your explanation with specific amounts.
- If he does not have enough points for the CD player, how many more coupons does he need to get 750 points?

Open-ended Question

Use with Chapter 1, Activity 9B

Name_____Date_____

Mr. and Mrs. Mull decided to have a garage sale. They wanted to raise enough money to buy a digital camera that cost $800 (including tax). When the garage sale was over, Mr. Mull had three $100 bills, thirteen $10 bills and eight $1 bills. Mrs. Mull had one $100 bill, twelve $10 bills and seventeen $1 bills.

- Tell whether or not Mr. and Mrs. Mull made the $800 from the garage sale.
- Tell how you know. Make sure to show your work and support your explanation with specific amounts.
- If they were not able to buy the digital camera with the amount made, how much more do they need to buy the camera?

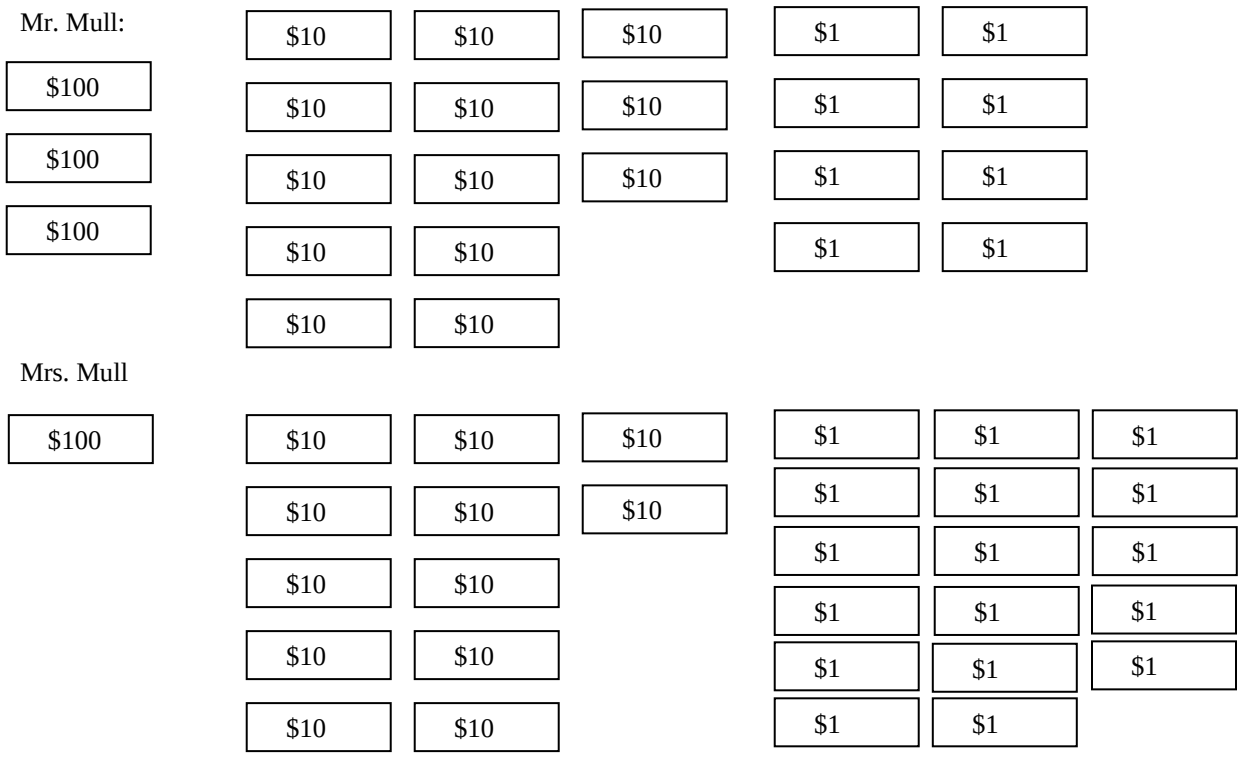
Evaluating Sample Student Responses

Use with Chapter 1, Activity 9C

Name_____**Date**_____

Read each of the responses carefully. Think about the question and answer, and then write what is good about each response and what needs improvement.

Jane's Response:



First I drew all the bills like above. Then like in win a flat I found the ones that could be exchanged. I come up with 500 in all cause there are 3 $100's and then 2 more for the exchanges. Then there are 7 10's cause 5 are left over and then 2 more is from the twenty 1's. So in all they got 575. They need $225 more.

Comments: Tell what is good about this response. Tell what you would change about this answer so it would be better/correct.

Good_____

_____

_____

Improvements:_____

_____

_____

Dan's Response:

I added all the amounts together and it came to 675. So they cannot buy the camera they need $125 more.

Comments: Tell what is good about this response. Tell what you would change about this answer so it would be better/correct.

Good_____

_____

_____

Improvements:_____

_____

_____

Jake's Response:

300	*100*	*438*	*800*
130	*120*	*237*	*– 675*
8	*17*	*675*	*125*
438	*237*		

Comments: Tell what is good about this response. Tell what you would change about this answer so it would be better/correct.

Good_____

_____

_____

Improvements:_____

_____

_____

Lucinda's Response:

Mr. Mull had $438. 3 $100 = 300 and 13 $10 = 130 and then 8 $1 so I added them he had 438.
Mrs. Mull had $237 1 $100 = 100 and 12 $10 bills = 120 and then 17 $1 so I added them she is 237.

Comments: Tell what is good about this response. Tell what you would change about this answer so it would be better/correct.

Good_____

_____

_____

Improvements:_____

_____

_____

Otto's Response:

First they put the money together and sorted it. They had
4 $100
25 $10's
25 $1
You add 'em and get 100 so 100 x 10 is 1000 they had plenty they even had 80 left over for an extra battery.

Comments: Tell what is good about this response. Tell what you would change about this answer so it would be better/correct.

Good_____

_____

_____

Improvements:_____

_____

_____

Rosario's Response:

To get how much they had together I add 438 + 237 which is 675. not enough for the camera.

Comments: Tell what is good about this response. Tell what you would change about this answer so it would be better/correct.

Good_____

_____

_____

Improvements:_____

_____

_____

Franco's Response:

Add all the amounts:

Mr. Mull	*Mrs. Mull*	*Together*	*more needed:*
300	*100*	*438*	*800*
130	*120*	*227*	*- 655*
8	*7*	*655*	*255*
438	*227*	*They shuda charged more for some stuff so they wood have enough.*	

Comments: Tell what is good about this response. Tell what you would change about this answer so it would be better/correct.

Good_____

_____

_____

Improvements:_____

_____

_____

Cathy's Response:

They cannot buy the camera. It rained that day and almost nobody showed up.

Comments: Tell what is good about this response. Tell what you would change about this answer so it would be better/correct.

Good_____

_____

_____

Improvements:_____

_____

_____

Math Power

Use with Chapter 2, Math Power #1

Name_____**Date**_____

Think of the Hundred Chart or multiplication tables as you complete each of these problems.

1. $\begin{array}{r} 56 \\ +\ 9 \\ \hline \end{array}$	2. $\begin{array}{r} 6 \\ \times\ 4 \\ \hline \end{array}$	3. $\begin{array}{r} 100 \\ -\ 41 \\ \hline \end{array}$	4. $21 + 16 =$
5. $\begin{array}{r} 67 \\ -\ 43 \\ \hline \end{array}$	6. $6 \times 9 =$	7. $\begin{array}{r} 70 \\ -\ 51 \\ \hline \end{array}$	8. $40 + 32 =$
9. $19 + 23 =$	10. $\begin{array}{r} 9 \\ \times\ 2 \\ \hline \end{array}$	11. $\begin{array}{r} 61 \\ +\ 40 \\ \hline \end{array}$	12. $\begin{array}{r} 83 \\ -\ 19 \\ \hline \end{array}$
13. $\begin{array}{r} 47 \\ -\ 18 \\ \hline \end{array}$	14. $7 \times 8 =$	15. $\begin{array}{r} 90 \\ -\ 33 \\ \hline \end{array}$	16. $\begin{array}{r} 60 \\ +\ 39 \\ \hline \end{array}$
17. $\begin{array}{r} 43 \\ +\ 20 \\ \hline \end{array}$	18. $\begin{array}{r} 8 \\ \times\ 7 \\ \hline \end{array}$	19. $\begin{array}{r} 50 \\ -\ 17 \\ \hline \end{array}$	20. $45 + 19 =$

Math Power

Use with Chapter 2, Math Power #2

Name_____**Date**_____

1. $\begin{array}{r} 50 \\ +\ 16 \\ \hline \end{array}$	2. $\begin{array}{r} 6 \\ \times\ 3 \\ \hline \end{array}$	3. $\begin{array}{r} 30 \\ -\ 14 \\ \hline \end{array}$	4. $18 \div 3 =$
5. $7\overline{)56}$	6. $\begin{array}{r} 36 \\ -\ 23 \\ \hline \end{array}$	7. $\begin{array}{r} 43 \\ +\ 19 \\ \hline \end{array}$	8. $7 \times 8 =$
9. $19 + 47 =$	10. $\begin{array}{r} 100 \\ -\ 51 \\ \hline \end{array}$	11. $42 \div 6 =$	12. $\begin{array}{r} 46 \\ \times\ 3 \\ \hline \end{array}$
13. $\begin{array}{r} 53 \\ -\ 15 \\ \hline \end{array}$	14. $7 \times 9 =$	15. $\begin{array}{r} 17 \\ +\ 27 \\ \hline \end{array}$	16. $7\overline{)63}$
17. $\begin{array}{r} 70 \\ +\ 25 \\ \hline \end{array}$	18. $\begin{array}{r} 28 \\ \times\ 6 \\ \hline \end{array}$	19. $32 \div 4 =$	20. $92 - 30 =$

Applying Mental Math Addition, Subtraction and Multiplication Strategies to Solve Math Power Problems

Use with Chapter 2, Math Power #2

Name_____Date_____

The statements below show how Lillie solved the problems on the Math Power sheet just completed by the class.

1. First she circled the numbers of Problems 1, 7, 9, 15, and 17. Why do you think she circled those numbers?

2. Lillie then put a star on Problems 1 and 17. Why do you think she put a star on those addition problems?

3. Lillie also put a double star on Problems 7 and 9. Why do you think she put a double star on those addition problems?

4. Lillie then put a square around the Problems 3, 6, 10, 13, and 20. Why do you think she put a square around those numbers?

5. Lillie then completed Problems 3 and 10. What do these problems have in common?

6. Lillie then finished the rest of the subtraction problems. Why do you think she grouped these subtraction problems together?

7. After the addition and subtraction problems, Lillie put a trapezoid around the Problems 2, 8, 12, 14, and 18. Why do you think she grouped these problems together?

8. Lillie then put a star on Problems 12 and 18. Why do you think she grouped these problems together?

9. She then finished the multiplication Problems 2, 8 and 14. What do these problems have in common?

10. Lillie now finished the sheet by completing Problems 4, 5, 11, 16 and 19. Why do you think she grouped these together?

11. What connection do the pairs of Problems 2 and 4, and 5 and 8, 14 and 16 seem to have?

Open-ended Question

Use with Chapter 2, Activity 6A

Name_____**Date**_____

Mr. Nearing decided to make a rectangular garden plot that would be 18 feet by 15 feet. He decided to divide the garden into four sections as shown below.

He wanted to have to use the following square footage for each of four different vegetables:

Corn: 100 square feet
Beans: 80 square feet
Tomatoes: 50 square feet
Peppers: 40 square feet

- Label each of the sections to show the type of vegetable that will be in that section.
- Tell how you know.
- While at the Sow and Grow, Mr. Nearing decided to buy bags of fertilizer for the entire garden. One bag of fertilizer is enough for 100 square feet. What is the least number of bags he needs to buy for his garden?
- Tell how you know.