Math Challenge #4

First Name: _____	Last Name: _____	Grade: _____
Teacher: _____	Parent's email: _____	

Grocery Shopping

Fruits on Sale

Kinder & First Grade: solve <u>at least</u> 3 problems.
Second & Third Grade: solve <u>at least</u> 7 problems.
Fourth Grade and above: solve <u>at least</u> 12 problems.

75¢   35¢ $1.65 $3.95   55¢   95¢ $3.25

Use the above information to solve question number 1 to 9.   *Answer*

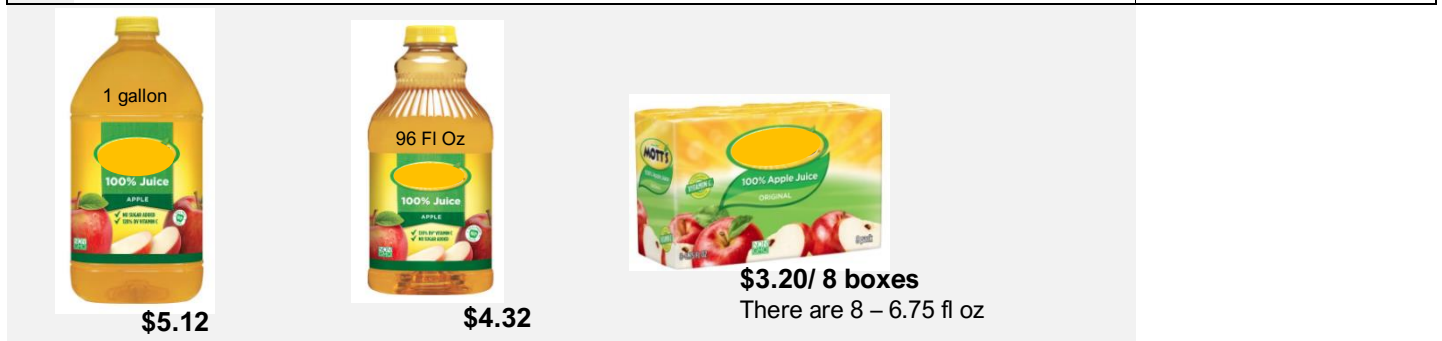|		
1.	Timothy bought 2 oranges, two kiwis and a papaya. How many pieces of fruit did Timothy buy?	*5*
2.	Lisa bought two pieces of each type of fruits that are on sale. How many pieces of fruit did she buy in total?	*14*
3.	Tina has only one dollar. She wants to buy one piece of fruit. How many fruits that cost less than $1? 4 fruits (an orange, a banana, a kiwi, and a peach)	*4*
4.	With her $1, Tina realizes that she can buy two different fruits. What are they? A banana and a kiwi	*A banana and a kiwi*
5.	Anita bought 2 piece of fruit from the store. It cost her $1.30. Which two items could she have bought? List the two possibilities. An orange and a kiwi, or a banana and a peach	*An orange and a kiwi, or* *a banana and a peach*
6.	What is the largest number of different fruits can you buy with a $5 bill? 5 fruits (an orange, a banana, a kiwi, a peach, and an avocado) 0.75 + 0.35 + 1.65 + 0.55 + 0.95 = $4.25	*5 [fruits]*
7.	The Danson family (Mom, Dad, Tim and Sarah) each picked a fruit to buy from the store. The family bought bananas, oranges, peaches and papayas. • Mom did not get the cheapest fruit. • Dad loves fruits that are juicy. • Tim likes the one that cost about a dollar. • Everyday, Sarah brings one of the fruits she picked to school. Find out who pick which fruit. Tim likes peaches ($0.95), Dad likes oranges (juicy), Sarah picks bananas, and mom picks papayas	*Mom: Papayas* *Dad: Oranges* *Tim: Peaches* *Sarah: bananas*
8.	What is the largest number of fruits can you buy with a $5 bill? 500 ÷ 35 = 14 bananas	*14 [bananas]*

9.	Jeremy wishes to buy one peach for each day that he will take his lunch to work with him this week. He will work 5 days, but on one day, his sister is taking him to a restaurant for lunch. If his local grocer sells peaches for $0.95 each, how much will he spend on peaches for his lunches this week? 4 peaches only, thus, $0.95×4=$3.80	*$3.80*

$1.16/ lb.   **$5.95/bag**   **39¢ each**

95¢ each   **$1.68/lb.**

$0.66/ lb.

10.	Maria needs to buy 8 tomatoes for her special pasta sauce. How much cheaper if she is buying a bag of tomatoes as compared to buying individual tomatoes? 8 tomatoes individually: 8 × $0.95 = $7.60 and it will be cheaper by $7.60 - $5.95 = $1.65	*$1.65 [cheaper]*
11.	Rhea is buying a pound of carrots, a pound of broccoli, a pound of green beans, an onion, and 4 tomatoes to make a large pot of vegetable soup. How much will these vegetables cost? $0.66 + $1.16 + $1.68 + $0.39 + (4 × $0.95) = $7.69	*$7.69*
12.	Ayan is making a small batch of vegetable soup. He plans to use half a pound of each of the following: carrots, brocolli, green beans. He would use 2 tomatoes and a whole onion. How much will these ingredients cost? $0.33 + $0.58 + $0.84 + $0.39 + (2 x $0.95) = $4.04	*$4.04*

1 gallon

96 Fl Oz

$3.20/ 8 boxes
There are 8 – 6.75 fl oz

$5.12   **$4.32**

Use the above information to solve question number 13 and 14.

13.	For the student store, Sienna bought 6 packs of apple juice at $3.20 per pack. She sells each juice box at $0.75 each. If she sells all the juice boxes in one day, how much profit will she get from selling these apple juice? Hint: find out what profit is.	*$16.80*
	The cost of the 6 packs of apple juice: $3.20 x 6 = $19.20. The number of boxes she sells: 6 x 8 = 48 boxes. The money received from selling the juice: $0.75 x 48 = $36.00 Her profit: $36.00 - $19.20 = $16.80 **Or** 1 box costs originally $3.20 ÷ 8 = $0.40 The profit made on 1 box is $0.75 – $0.40 = $0.35 She sells 6 × 8 = 48 boxes, so the profit is 48 × $0.35 = $16.80	
14.	Mrs. Moore is shopping for apple juice and she compares two sizes of apple juice containers for her family. Which is a better buy, the 1-gallon juice or 96 Fl Oz juice? And why? 1 gallon = 128 fluid ounces. Let's compare them by using the same unit. The cost of 128 fluid ounces is $5.12, or $5.12 ÷ 128 = $0.04 per Fl Oz The cost of 96 fluid ounces is $4.32, or $4.32 ÷ 96 = $0.045. The 96 Fl Oz is slightly higher in price when you compare them in Fl Oz.	*The one-gallon bottle is a better buy because it is slightly cheaper when compared using the same unit.*

15.	For a fundraising, the math club held a donut sale. All profits will go to the local charity. They bought 10 dozen of donuts at a discounted price of $5.55 per dozen. They plan to sell each donut after school at $1.50 apiece. If they sell 90% of the donuts, how much money will they donate to the local charity? The cost for purchasing the 10 dozen (or 120) of donuts: $5.55 x 10 = $55.50 90% of the donuts: 90/100 x 120 = 108 The money received from selling the donuts: 108 x $1.50 = $162. The amount of money they will donate: $162 - $55.50 = $106.50	*$106.50*
16.	A store offers a 50% discount on a package of steak that is normally priced for $29. The sales tax is 7.25%. What does the package of steak cost, including tax? The amount of discount = $29 x 50/100 = $14.50. Discounted price = $29 - $14.50 = $14.50. Sales tax = $14.50 × 7.25/100 = $1.05. Total cost = $14.50 + $1.05 = $15.55.	*$15.55*
17.	You have a coupon worth $18 off the purchase of a new microwave. At the same time the microwave is offered with a discount of 15%, but no further discounts may be applied. What would be the full price of the microwave if you end up paying the same amount for each discount? One way is to compare by drawing a model: $18 discount: | **Sale price** | **$18** | 15% discount: | **Sale price (85%)** | **15%** | The sale tag must be 85% of the full price and 15% of the price must equal to $18. 0.15 x full price = $18. The full price of the microwave is $18 ÷ 0.15 = $120 **Or** The full price of the microwave is 100%, discount of $18 is the same as 5%, which means $6 is 5%, thus $6×20 = $120 (or 100%)	*$120*
18.	Last week, Mrs. Lanvin bought a package of paper towels on sale at 5.98. This week the same package of paper towels is no longer on sale and it is priced at $7.95. What was the discount rate in percent last week? Round your answer to the nearest hundredths. $$Discount\ rate = \frac{regular\$ - discounted\$}{regular\$} \times 100\%$$ The difference in price: $7.95 - $5.98 = $1.97 In percent: $1.97/7.95 = 0.2477987421 ≈ 24.78%	*24.78%*

Solution is available on November 20, 2020 at www.mathinaction.org