

Fifth Grade Unit 4: Adding and Subtracting Partial Numbers

Real World Experience



Your class is making Rainbow Loom bracelets to sell at a craft fair. The class will need bags of colored bands.

Task 1:

- A. Your teacher will buy one bag of each of the following colors: green, yellow, orange and blue. Each bag contains 600 bands. The price for a bag of green bands is \$2.69, a bag of yellow bands is \$2.75, a bag of orange bands is \$1.89, and a bag of blue bands is \$2.95. All prices include sales tax. How much will it cost for all four bags?
- B. If the teacher has \$20, can he/she buy all four bags? Explain your thinking using pictures, numbers and words.
- C. If you answered yes to Part B, calculate how much money he/she will get back from the cashier?

Task 2:

- A. In addition to the bags your teacher purchased, classmates also donated bags of bands. Determine the total number of bags of each color donated. Accurately complete the total line for each column.

Explain your thinking below the table using pictures, numbers and words.

Student	Bags of Green	Bags of Yellow	Bags of Orange	Bags of Blue
Abraham			$3\frac{1}{5}$	
Jessie		0.25		
Andrea	$\frac{2}{3}$		$\frac{3}{5}$	
Matt		$\frac{1}{2}$	$1\frac{2}{5}$	$\frac{1}{3}$
Luke		$\frac{3}{4}$		$2\frac{2}{6}$
Rosa	$\frac{1}{3}$			1.5
TOTAL				

- B. Knowing your teacher bought one bag of each color, determine how many total bags your class now has of each color.
- C. You will need a total of 4 bags of green, 4 bags of yellow, 7 bags of orange and 7 bags of blue. How many bags of each color do you still need? Explain your thinking in pictures, numbers and words.
- D. Using the change the teacher receives from Task 1 part C, how much more money does the class need to purchase the missing bags of bands? Explain your thinking in pictures, numbers and words.

Task 3: Write a letter to the principal asking him/her to help your class. You are looking for the principal to help you get the money you need to complete this project. In order to persuade him/her to help you, remember to thoroughly explain all of your mathematical thinking that you did to complete these tasks.

You should share with the principal

- Purpose of letter (persuasive)
- Ask him/her to donate “x” dollars to complete the project
- What amount did the teacher donate
- The number of bags donated
- The amount of bags the class still needs
- The cost of what is still needed
- The change the teacher donated from task 1
- Restate the purpose of your letter

Fifth Grade Unit 4: Adding and Subtracting Partial Numbers

Real World Experience

Your class is making Rainbow Loom bracelets to sell at a craft fair. The class will need bags of colored bands.

Task 1:

- A. One bag of 600 bands of a single color costs \$2.69 (includes tax). Your teacher will buy one bag of each of the following colors: green, yellow, orange and blue. How much will it cost for all four bags?

\$2.69

\$2.75

\$1.89

+\$2.95

\$10.28

- B. If the teacher has \$20.00, can he/she buy all four bags? Explain your thinking using pictures, numbers and words. (explanations may vary)

\$20.00

- \$10.28

\$9.72

yes there is enough money to buy 4 bags since the cost is less than the amount the teacher has

- C. If you answered yes to Part B, calculate how much money he/she will get back from the cashier?

\$20.00

- \$10.28

\$9.72 amount of change received

Task 2:

In addition to the bags you purchased, classmates also donated bags of bands. Determine the total number of bags of each color donated. Complete accurately the total line for each column. Explain your thinking below the table using pictures, numbers and words. (Work shown may vary. Students should show understanding of needing to have common denominators to combine or add fractions correctly)

Student	Bags of Green	Bags of Yellow	Bags of Orange	Bags of Blue
Abraham			$3\frac{1}{5}$	
Jessie		0.25		
Andrea	$\frac{2}{3}$		$\frac{3}{5}$	
Matt		$\frac{1}{2}$	$1\frac{2}{5}$	$\frac{1}{3}$
Luke		$\frac{3}{4}$		$2\frac{2}{6}$
Rosa	$\frac{1}{3}$			1.5
TOTAL	1	$1\frac{1}{2}$	$5\frac{1}{5}$	$4\frac{1}{6}$

- B. Knowing your teacher bought one bag of each color; determine how many total bags your class has of each color.

$$1 + 1 = 2 \text{ bags of green bands}$$

$$1\frac{1}{2} + 1 = 2\frac{1}{2} \text{ bags of yellow bands}$$

$$5\frac{1}{5} + 1 = 6\frac{1}{5} \text{ bags of orange bands}$$

$$4\frac{1}{6} + 1 = 5\frac{1}{6} \text{ bags of blue bands}$$

- C. You will need a total of 4 bags of green, 4 bags of yellow, 7 bags of orange and 7 bags of blue. How many bags of each color do you still need? Explain your thinking in pictures, numbers and words.

(Work shown may vary. Students should show understanding of needing to have common denominators to subtract mixed numbers correctly)

$$4 - 2 = 2 \text{ bags of green bands needed}$$

$$4 - 2\frac{1}{2} = 1\frac{1}{2} \text{ bags of yellow bands needed}$$

$$7 - 6\frac{1}{5} = \frac{4}{5} \text{ bags of orange bands needed}$$

$$7 - 5\frac{1}{6} = 1\frac{5}{6} \text{ bags of blue bands needed}$$

- D. Using the change the teacher receives from Task 1 part C, how much more money does the class need to purchase the missing bags of bands? Explain your thinking in pictures, numbers and words. (Work shown may vary.)

Need to buy:

2 bags green bands 2 bags yellow bands 2 bags orange bands 3 bags blue bands

$$2 + 2 + 2 + 3 = 9 \text{ bags total}$$

2 green bags

\$2.69

+ \$2.69

\$5.38

2 yellow bags

\$2.75

+\$2.75

\$5.50

1 orange bag

\$1.89

3 blue bags

\$2.95

+\$2.95

\$5.90

\$ 5.38

\$ 5.50

\$ 1.89

+ \$ 5.90

\$18.67 total cost to purchase 9 bags

- \$ 9.72

\$ 8.95 needed to purchase supplies

Task 3 Scoring Guide

Meeting

- Included how much money your teacher donated to this project
- Explained how much change the teacher receives in Task 1
- Explained how you calculated the amount of change
- Explained how you calculated the amount of bags donated
- Explained how you calculated the amount of bags you need to complete the project
- Explained the total amount of money spent to complete the bracelets for the craft fair including what your teacher spent
- Explained how you calculated total cost request from the principal

Developing

- Meets 5 out of 7 proficient criteria

Beginning

- Meets fewer than 5 of the proficient criteria
- Task to be repeated after re-teaching

Comments: