

# **Using High Quality Tasks to Promote Meaningful Teacher Feedback**

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| Supporting Meaningful Feedback in the Mathematics Classroom |                          |
|-------------------------------------------------------------|--------------------------|
| What is the teacher doing?                                  | What are students doing? |
|                                                             |                          |

## Problem #1

Mini candy bars come 10 in a package. Each bar is 2 inches long. How long will a train of 10 bars be if they are lined up end to end in a row with a  $\frac{1}{4}$  inch space between them?

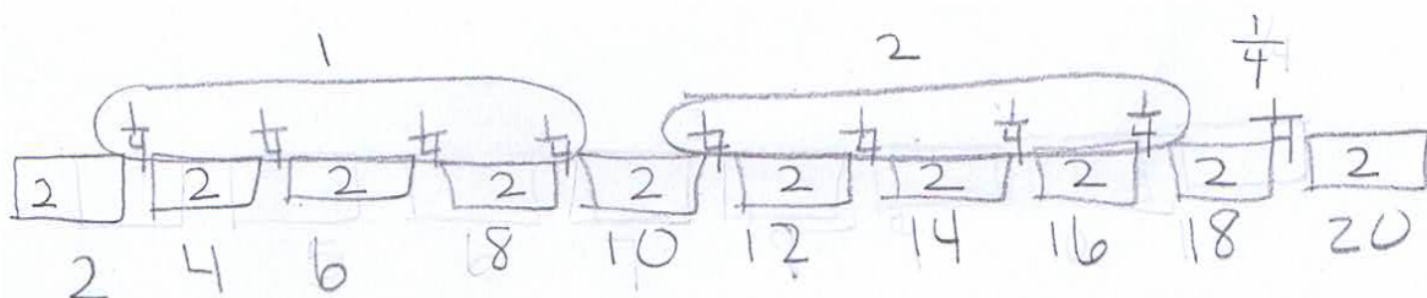


Adapted from Ms. Linares' 4<sup>th</sup> grade classroom

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## Work Space

**Student 1**  
**Mini Candy Bar Problem**



I drew 10 Candy bars in a row. I know each one is 2 inches long so I counted by two up to 20. The candy takes 20 inches. There is  $\frac{1}{4}$  inch between each bar. Four  $\frac{1}{4}$ s make 1 whole so there are 2 wholes +  $\frac{1}{4}$ . That makes  $2\frac{1}{4}$  inches in spaces. I added the bars and spaces.

$$20 + 2\frac{1}{4} = 22\frac{1}{4} \text{ inches.}$$

The train is  $22\frac{1}{4}$  inches long.

## Student 2

### Mini Candy Bar Problem



My train has 10 bars and 9 spaces. I multiplied  $10 \times 2$  because bars are 2 inches.  
 $10 \times 2 = 20$  inches

I multiplied  $9 \times \frac{1}{4}$  for the spaces, that makes  $\frac{9}{4}$ . 

$\frac{9}{4} = 2\frac{1}{4}$ . Then I added

$$20 + 2\frac{1}{4} = 22\frac{1}{4} \text{ inches}$$

## Characteristics of High Quality Task

### High Quality Tasks:

- Build mathematical proficiency
- Challenge and enrich student thinking
- Develop mathematical vocabulary related to the ideas and concepts
- Promote the ability to learn multiple ways of thinking about and representing mathematical ideas (pictures, diagrams, concrete models, numeric/symbolic)

NCSM Great Tasks for Mathematics K-5  
(Shrock, Norris, Pualee, Seitz, & Hollingshead) 2013

### A great task:

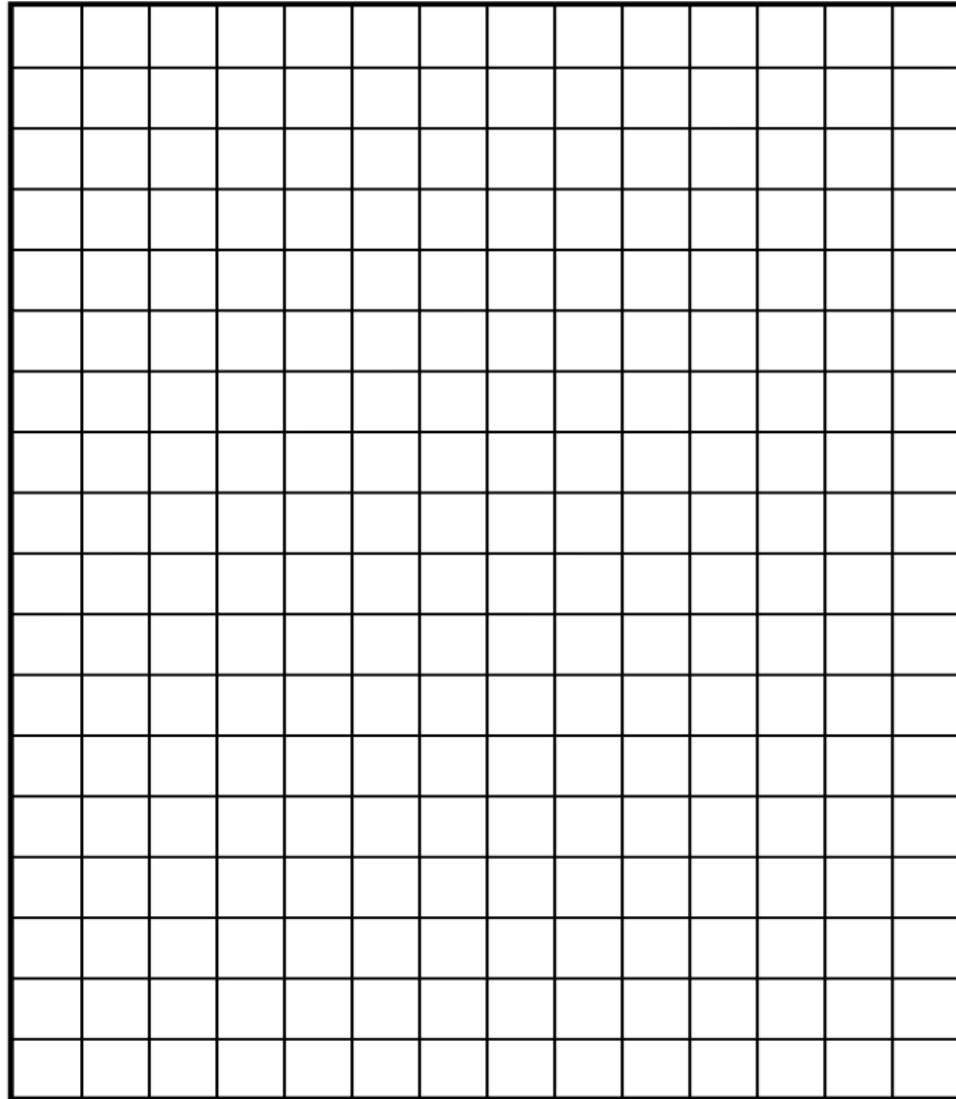
- Revolves around an interesting problem
- Is directed at essential mathematical content
- Requires examination and perseverance – challenging students
- Begs for discussion – offering rich discourse on the mathematics
- Builds student understanding
- Warrants a summary look back – with opportunities for reflection and extension

-NCSM Great Tasks Webinar  
(Mitchell & Schrock) January 15, 2013

Name \_\_\_\_\_ Date \_\_\_\_\_

## Counting Squares

1. How many small squares are in the large rectangle below? Show or tell how you found your answer.



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### Problem #3

#### Cornbread Fundraiser

The 5<sup>th</sup> graders want to raise money for their overnight camping trip by selling cornbread during the school district Chili Cook-Off contest. All the pans of cornbread are squares. A pan of cornbread costs \$12.00. The customers can buy any fractional part of a pan of cornbread and pay that fraction of \$12.00. For example,  $\frac{1}{2}$  of full pan costs  $\frac{1}{2}$  of \$12.00.

A Customer, Mrs. Farmer wants to buy cornbread. The pan is  $\frac{1}{4}$  full. Mrs. Farmer wants to buy  $\frac{1}{3}$  of the remaining Cornbread. What fraction of the whole pan does she want to buy? How much will she pay for her purchase?



Adapted from Ms. Farmers' 5<sup>th</sup> Grade Classroom

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### Work Space

## Student A

## Exit Task—Cornbread Fundraiser

- A) Mr. Farmer walks up to buy cornbread and the pan was  $\frac{1}{2}$  full. He wants to buy  $\frac{3}{5}$  of the remaining cornbread. What fraction of the whole pan does he want to buy?



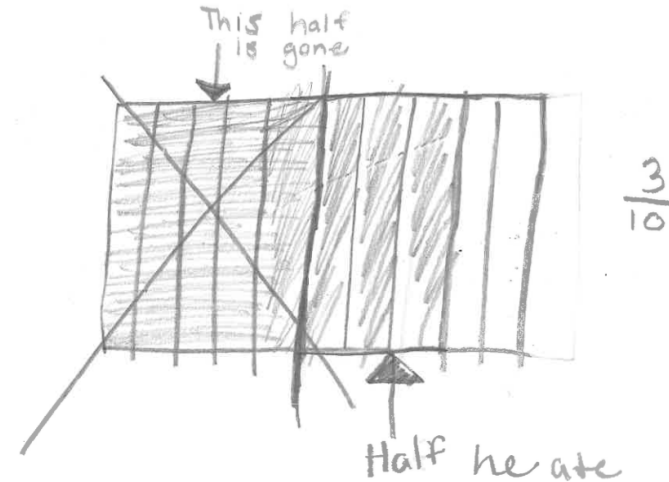
- B) Where do you see multiplication in this problem? Explain your reasoning.

Multiplication comes in when you are finding the denominator because there is 2 halves and five fifths in each so you do  $5 \times 2 = 10$  and so then you have your denominator.

## Student B

## Exit Task—Cornbread Fundraiser

- A) Mr. Farmer walks up to buy cornbread and the pan was  $\frac{1}{2}$  full. He wants to buy  $\frac{3}{5}$  of the remaining cornbread. What fraction of the whole pan does he want to buy?



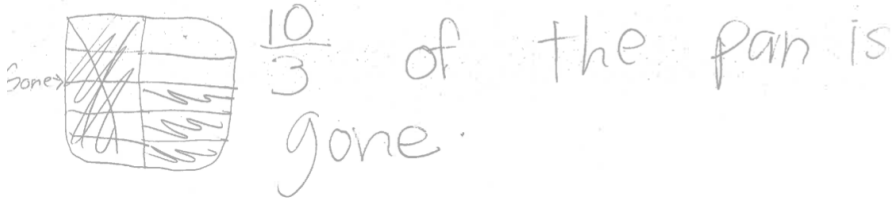
- B) Where do you see multiplication in this problem? Explain your reasoning.

I am not really sure because I don't know how to do that.

## Student C

## Exit Task—Cornbread Fundraiser

- A) Mr. Farmer walks up to buy cornbread and the pan was  $\frac{1}{2}$  full. He wants to buy  $\frac{3}{5}$  of the remaining cornbread. What fraction of the whole pan does he want to buy?



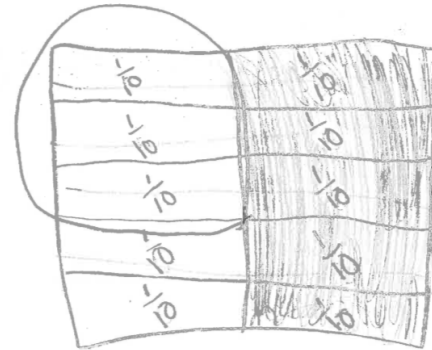
- B) Where do you see multiplication in this problem? Explain your reasoning.

Well I did not use mutiplo  
Cashon I just made a  
square and took it away  $\frac{10}{3}$  is  
the answer.

## Student D

## Exit Task—Cornbread Fundraiser

- A) Mr. Farmer walks up to buy cornbread and the pan was  $\frac{1}{2}$  full. He wants to buy  $\frac{3}{5}$  of the remaining cornbread. What fraction of the whole pan does he want to buy?



the shaded  
part is  
what was  
eaten.

the circled  
part is  
what she  
wants to  
buy.

\*5 of the  
10ths is not  
shaded is what  
was not eaten

- B) Where do you see multiplication in this problem? Explain your reasoning

He needs to buy  $\frac{3}{10}$  wich is  
half of  $\frac{3}{5}$ .