## Module 2 Ratio, Proportion and Mathematical Representations

## Student Work Samples

The ratio of boys to girls in a class is 5 to 3 . After six girls join the class, the number of boys and girls in the class is the same. How many students are in the class now?

Student \#1

I took $\frac{5}{8}$ and multiplied
me $\frac{10}{16}$ then I added
6 (the number of new girls) to it and it gives me $\frac{16}{16}$, the number of Students in the class is
32,16 girls \& 16 boys.

Student \#2

| $F$ in class | $B$ | $G$ |
| :---: | :---: | :---: |
| 8 | 5 | 3 |
| 16 | 10 | 6 |
| 24 | 15 | 9 |
| 32 | 20 | 12 |
| 40 | $2 S$ | 15 |
| 48 | 30 | 18 |



Student \#3

$$
\begin{aligned}
& \frac{5}{8}=\text { boys }+6 \text { gil } \\
& \frac{5}{8}+\frac{3}{8}=\frac{8}{8} \\
& \frac{50}{\frac{5}{8}}=\frac{3}{8}+6 \\
& \frac{5}{8}+6=A \\
& 4 \frac{5}{8}= \\
& \text { I don't know }
\end{aligned}
$$

Student \#4


## Student \#5



Student \#6


## Proportional Situations and Graphs

## Problems

1. A Metric Conversion: If 6 inches is $15.24 \mathrm{~cm}, 9$ inches is how many centimeters?
2. A Candy company is developing packaging for their Chocolates. If they place 60 candies in a long box, there can be 6 rows of 10 candies. If the company decides to use a different box with 4 rows, how many candies would there be in each of 4 rows?
3. Sal is hosting a party for 50 people. He will have people sit at a long line of tables. Each table can seat 4 people, plus one person can sit at each end of the line of tables, as shown. Find the number of tables he will need to seat 50 people.


Solve the above problems. Record your solution strategy and discuss the following:

- Of the above problems, which are proportion problems and which are not? Briefly justify your answers.
- How do you graph each situation?


## Student Work Samples

Consider Student Work Samples

- What mathematics does each student know?
- What are the themes emerged from the samples below?
- What do we learn about each child based on their responses?


## Student Work Sample \#1



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Student Work Sample \#2
$6 P=1$ table
$12 P=2$ tables
$18 \%=3$ tables
$24 p=4$ tables
$30 P=5$ tables
$36 \rho=6$ tables
$42 P=7$ tables
$48 \rho=8$ tables
$50^{\circ}=9$ tables

Sal will need 9 tables to sect 50 People. There nous be 4 seats lest over.

Student Work Sample \#3


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Student Work Sample \#4


Student Work Sample \#5


## Student Work Sample \#6



## Student Work Sample \#7



