Lesson 15: Problem Solving with Line Plots

- Let's solve problems using a line plot.

Warm-up: Number Talk: Multiply by 18

Find the value of each expression mentally.

- $\frac{1}{3} \times 18$
- $\frac{2}{3} \times 18$
- $\frac{4}{3} \times 18$
- $\frac{5}{3} \times 18$

15.1: Info Gap: Picking Fruit

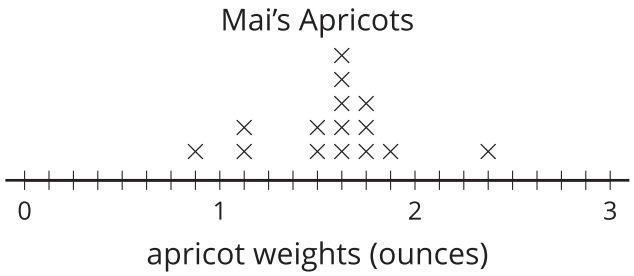
Your teacher will give you either a problem card or a data card. Do not show or read your card to your partner.

Pause here so your teacher can review your work.

Ask your teacher for a new set of cards and repeat the activity, trading roles with your partner.

15.2: Mathematical Questions

This line plot shows the weights of some apricots that Mai picked.



1. What fraction of the apricots weigh less than $1\frac{1}{2}$ ounces? Explain or show your reasoning.

2. Write a multiplication equation that represents the total weight of the apricots that each weigh $1\frac{5}{8}$ ounces.

3. Do all of Mai's apricots together weigh more or less than a pound? Explain or show your reasoning.

Section Summary

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In this section we learned to add and subtract fractions. When the denominators are the same, such as $\frac{7}{10} + \frac{4}{10}$, we can just add the tenths and see that there are 11 of them so $\frac{7}{10} + \frac{4}{10} = \frac{11}{10}$. When the denominators are not the same, such as $\frac{1}{6} + \frac{3}{8}$, we look for a common denominator so that we can add parts of the same size. One way to find a common denominator is to use the product of the two denominators, 6×8, because that's always a multiple of both denominators. Using 48 as a denominator we find $\frac{1}{6} + \frac{3}{8} = \frac{1\times8}{6\times8} + \frac{3\times6}{8\times6}$. This means $\frac{1}{6} + \frac{3}{8} = \frac{26}{48}$. For the expression $\frac{1}{6} + \frac{3}{8}$ we can

also use a smaller common denominator. Since 24 is a multiple of 6 and 8 we can also rewrite $\frac{1}{6} + \frac{3}{8}$ as $\frac{4}{24} + \frac{9}{24}$ which is $\frac{13}{24}$.