G3-M6-Lesson 6
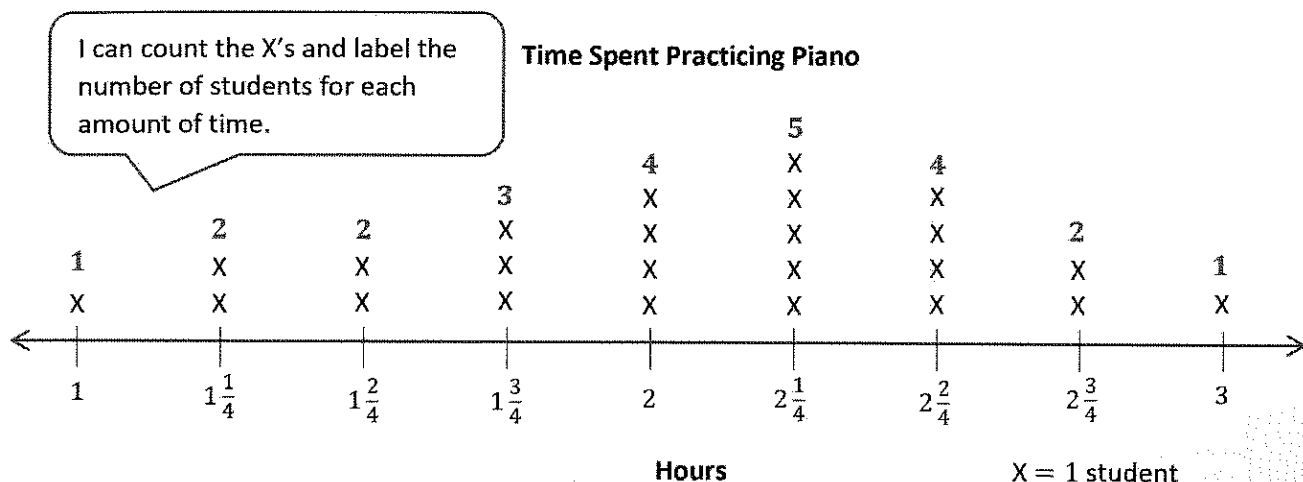
Mr. Jackson records the amount of time his piano students spend practicing in one week. The times are shown on the line plot below.

I can count the X's and label the number of students for each amount of time.

Time Spent Practicing Piano

	1	2	2	3	4	5	4	2	1

$1 \quad 1\frac{1}{4} \quad 1\frac{2}{4} \quad 1\frac{3}{4} \quad 2 \quad 2\frac{1}{4} \quad 2\frac{2}{4} \quad 2\frac{3}{4} \quad 3$

Hours   X = 1 student

a. How many students practiced for 2 hours?

   4 students practiced for 2 hours.

   I can look at the labels I put on the line plot after counting to easily answer this question.

b. How many students take piano lessons from Mr. Jackson? How do you know?

   24 students take lessons from Mr. Jackson. I know because I counted all of the X's on the line plot.

   I can count the X's, or I can add all of the numbers that I labeled on the line plot.
   $1 + 2 + 2 + 3 + 4 + 5 + 4 + 2 + 1 = 24$

c. How many students practiced for more than $2\frac{2}{4}$ hours?

   3 students practiced for more than $2\frac{2}{4}$ hours.

   Since it says more than $2\frac{2}{4}$ hours, I can just count the X's for $2\frac{3}{4}$ hours and 3 hours.

d. Mr. Jackson says that for students to participate in the recital, they must practice for at least 2 hours. How many students can participate in the recital?

16 students can participate in the recital.

> I can count the X's for the times that are equal to or more than 2 hours because the problems says, "at least 2 hours."

e. Mr. Jackson notices that the 3 most frequent times spent practicing are 2 hours, $2\frac{1}{4}$ hours, and $2\frac{2}{4}$ hours. Do you agree? Explain your answer.

Yes, I agree. 4 students practiced for both 2 hours and $2\frac{2}{4}$ hours, and 5 students practiced for $2\frac{1}{4}$ hours. These numbers of students, 4 and 5, are the most for any of the times practiced.

> I know that "most frequent times" means the times that most students spend practicing.

f. Mr. Jackson says that the most common time spent practicing is 10 quarter hours. Is he right? Why or why not?

No, he's not right. The most common time spent practicing is $2\frac{1}{4}$ hours. Since there are 4 quarter hours in each hour, there are 9 quarter hours in $2\frac{1}{4}$ hours.

$2 \times 4 = 8$

$8 + 1 = 9$

> I know that the most common time spent practicing is $2\frac{1}{4}$ hours. I find the number of quarter hours in $2\frac{1}{4}$ hours first by multiplying 2×4 because there are 2 hours, and each hour is made up of 4 quarter hours. Then I can add $8 + 1$ because there is 1 more quarter hour in the time $2\frac{1}{4}$ hours. That makes 9 quarter hours.

EUREKA
MATH™