

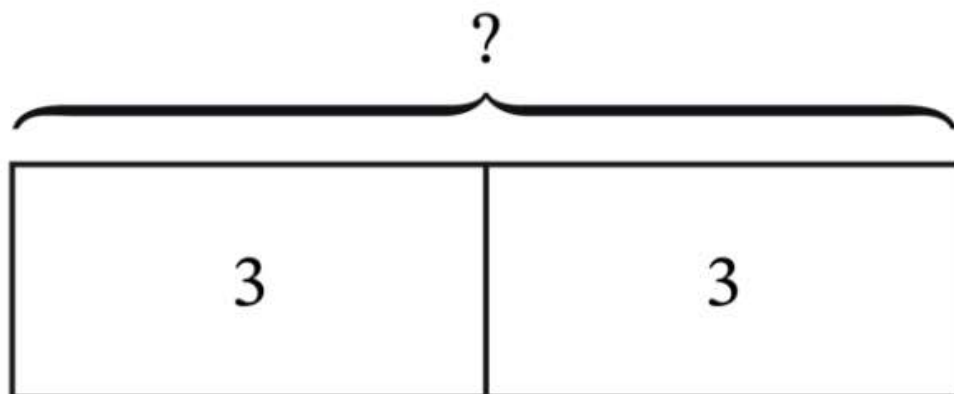
Lesson 16:

Solve problems using data from a line plot.

CCSS Standard – 5.MD.B.2

FLUENCY (10-min)

Whiteboard Exchange: Relate Repeated Addition to Multiplication

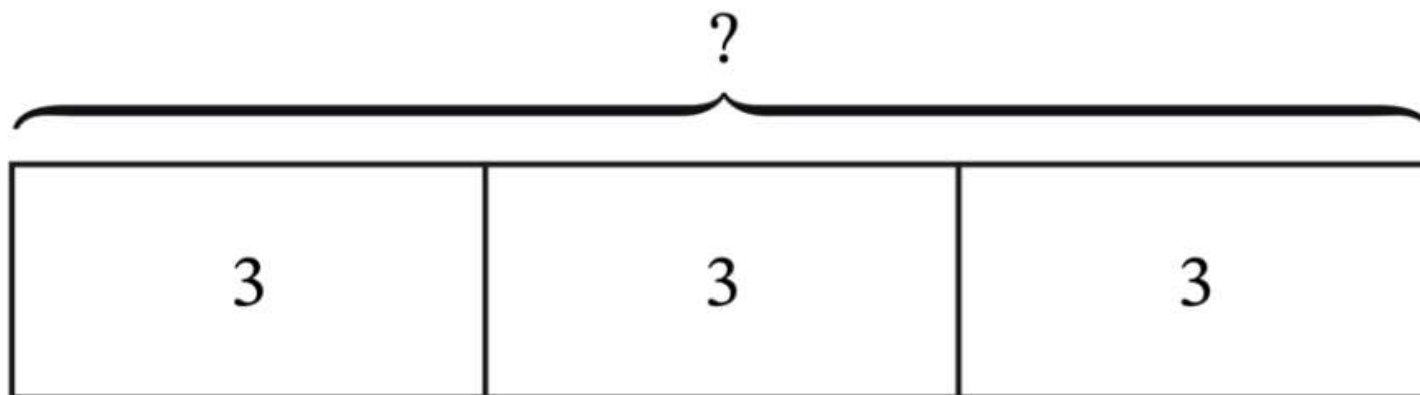


Write a repeated **addition** equation to represent the tape diagram.

Write a repeated **multiplication** equation to represent the tape diagram.

FLUENCY (10-min)

Whiteboard Exchange: Relate Repeated Addition to Multiplication

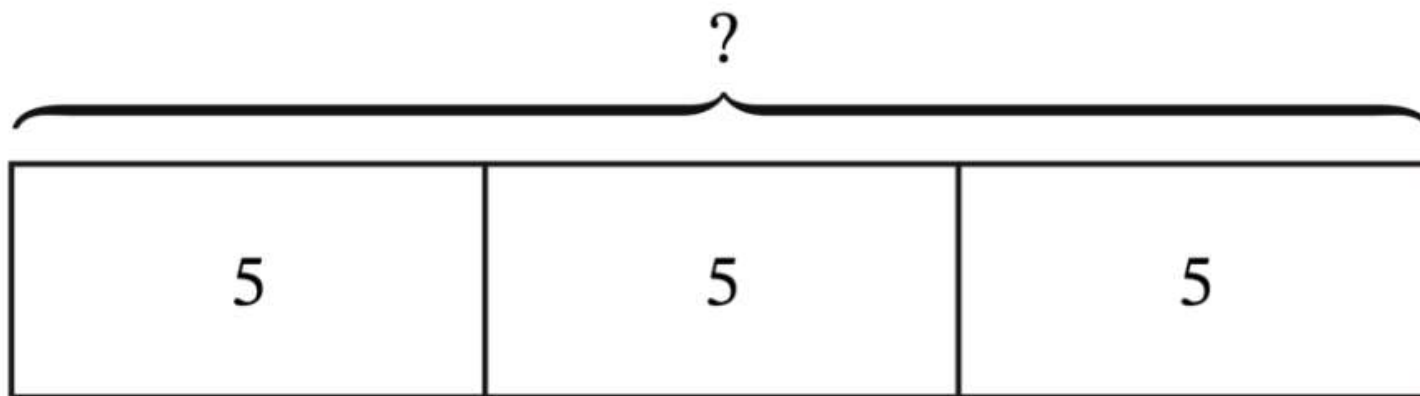


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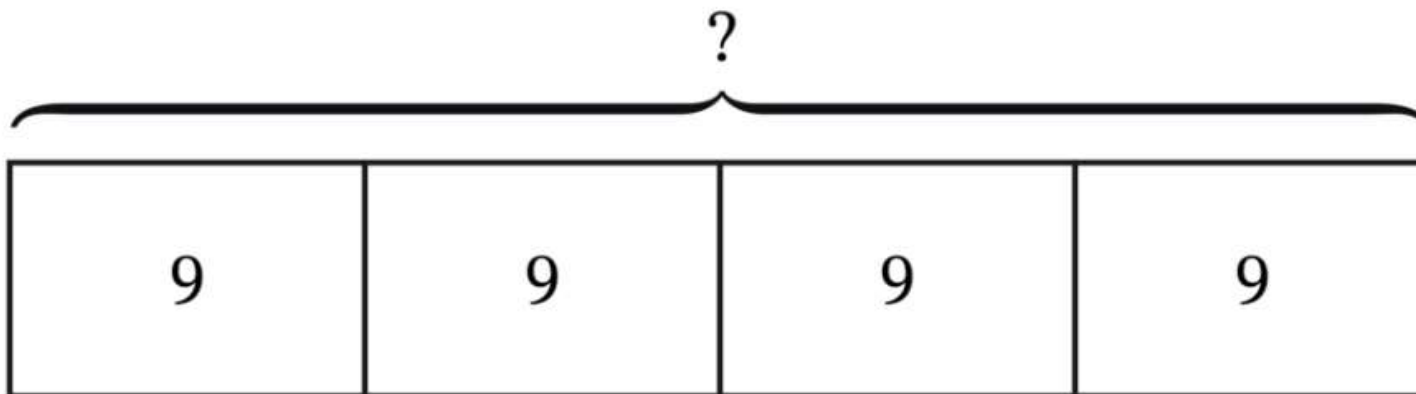


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FLUENCY (10-min)

Whiteboard Exchange: Relate Repeated Addition to Multiplication

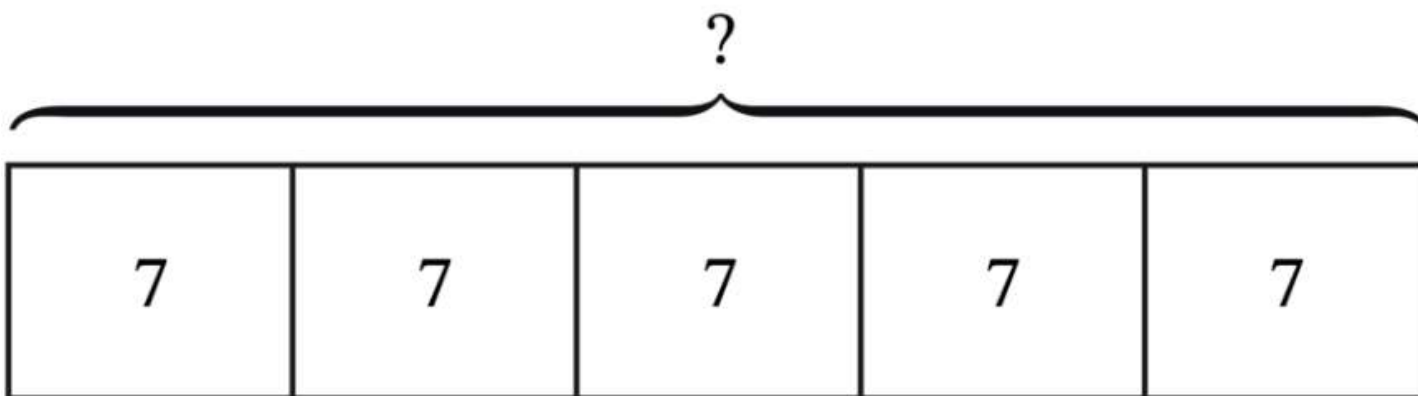


Write a repeated addition equation to represent the tape diagram.

Write a repeated multiplication equation to represent the tape diagram.

FLUENCY (10-min)

Whiteboard Exchange: Relate Repeated Addition to Multiplication



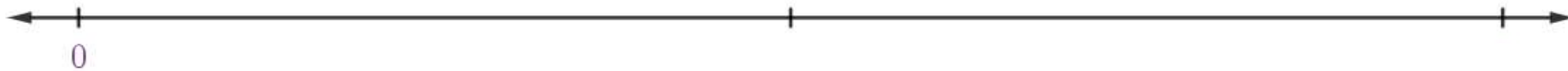
Write a repeated **addition** equation to represent the tape diagram.

Write a repeated **multiplication** equation to represent the tape diagram.

FLUENCY (10-min)

Counting on the Number Line: Halves, Fourths, Eighths

Use the number line to count forward and back by halves, fourths, and eighths to 1.



FLUENCY (10-min)

Whiteboard Exchange: Subtract Fractions



Raise your hand when you know the answer to each question.

Wait for my signal to say the answer.

$$\frac{3}{4} - \frac{1}{2} =$$

Look at the fractional units.

*Do they have **LIKE** units?*

***No!** Are the units **RELATED**?*

***Yes!** Which fraction can we **RENAME** so the fractional units, or denominators, are the same?*

1/2

FLUENCY (10-min)

Whiteboard Exchange: Subtract Fractions



Raise your hand when you know the answer to each question.

Wait for my signal to say the answer.

$$\frac{2}{3} - \frac{1}{6} =$$

*Look at the fractional units.
Do they have **LIKE** units?*

***No!** Are the units **RELATED**?*

***Yes!** Which fraction can we
RENAME so the fractional units, or
denominators, are the same?*

2/3

FLUENCY (10-min)

Whiteboard Exchange: Subtract Fractions



Raise your hand when you know the answer to each question.

Wait for my signal to say the answer.

$$\frac{7}{10} - \frac{2}{5} =$$

*Look at the fractional units.
Do they have **LIKE** units?*

***No!** Are the units **RELATED**?*

***Yes!** Which fraction can we
RENAME so the fractional units, or
denominators, are the same?*

2/5

FLUENCY (10-min)

Whiteboard Exchange: Subtract Fractions



Raise your hand when you know the answer to each question.

Wait for my signal to say the answer.

$$\frac{3}{4} - \frac{5}{12} =$$

*Look at the fractional units.
Do they have **LIKE** units?*

***No!** Are the units **RELATED**?*

***Yes!** Which fraction can we
RENAME so the fractional units, or
denominators, are the same?*

3/4

LAUNCH (5-min)

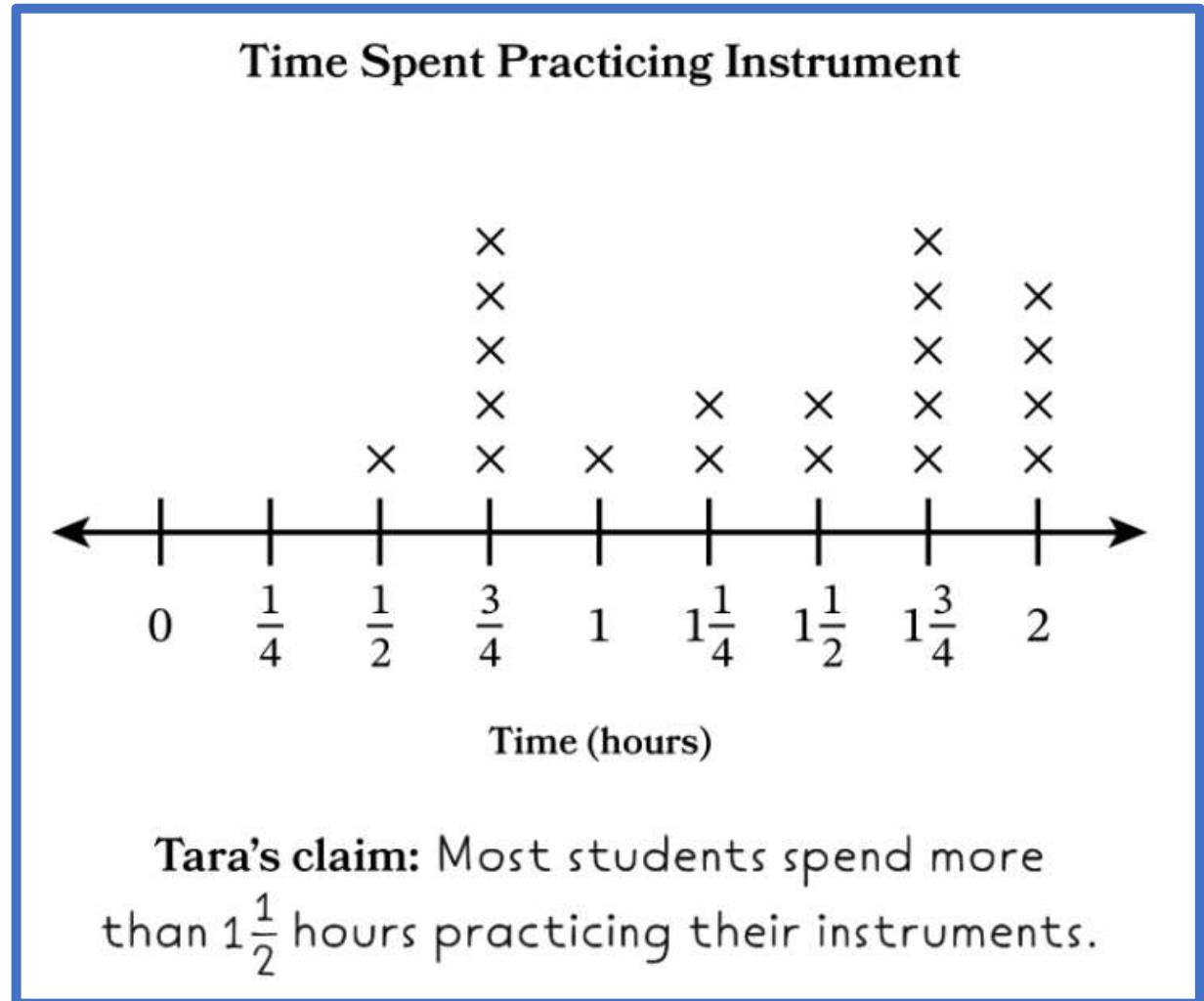
Use data from a line plot to determine information.

Tara claims most students in her music class practice their instruments far more than 1 ½ hours each day.

THINK-PAIR-SHARE: Is Tara's claim true based on the line plot?

Based on the line plot data, Tara's claim is NOT true. Only 9 out of 20 students spend more than 1 ½ hours practicing each day.

- What mistake do you think Tara made when she interpreted the data on the line plot?
- If Tara INCLUDES the number of students who spend 1 ½ hours practicing, how can she REWORD her claim so it is true.



LAUNCH (5-min)

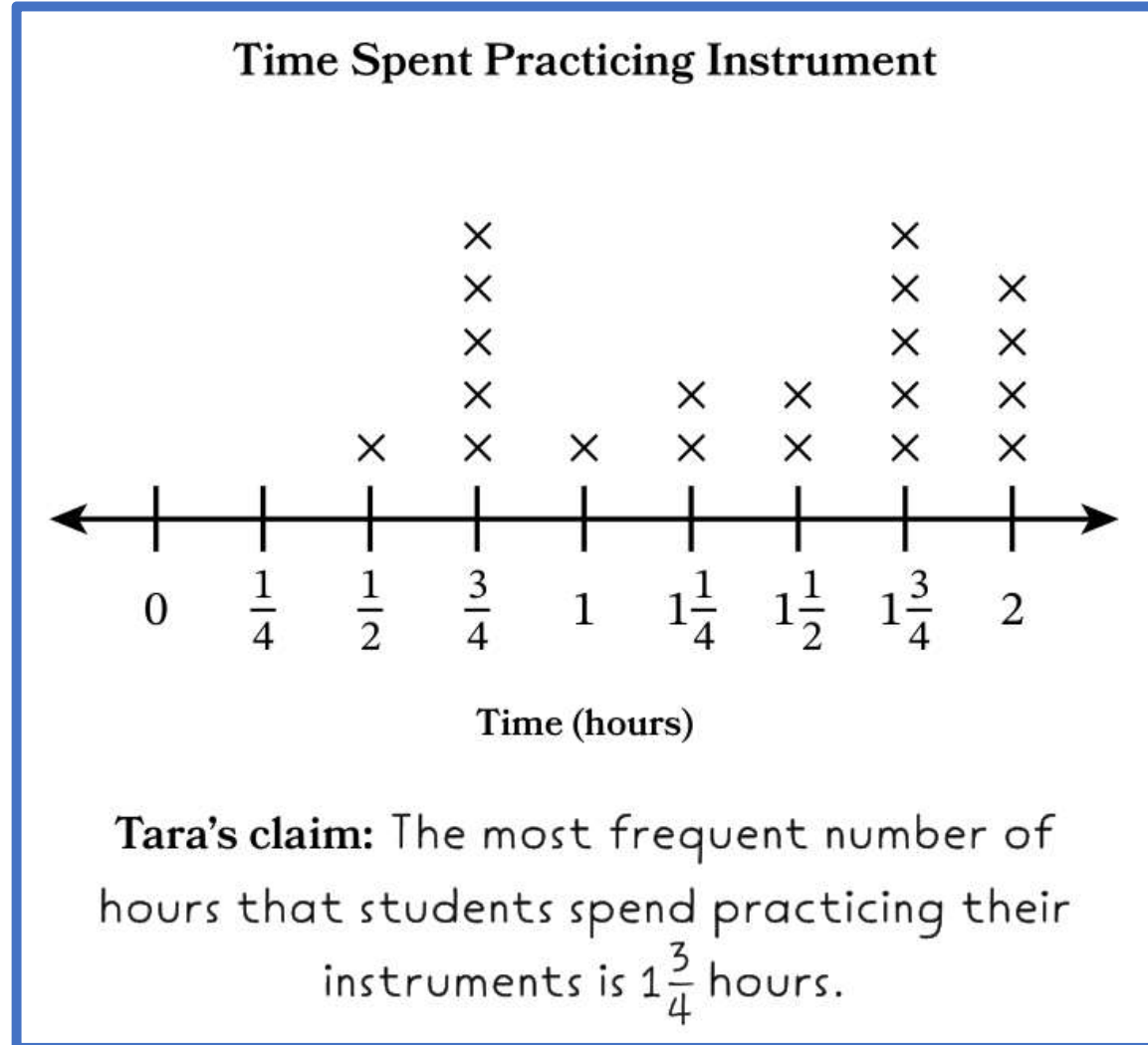
Use data from a line plot to determine information.

Tara claims the most frequent number of hours students practice their instruments each day is $1\frac{3}{4}$ hours. Do you agree? Why?

THINK-PAIR-SHARE: Is Tara's claim true based on the line plot?

No! I disagree because $\frac{3}{4}$ hours is **ALSO** one of the most frequent amounts of time. There are 5 students who practice for $\frac{3}{4}$ and there are 5 students who practice for $1\frac{3}{4}$.

- Today, we will solve problems by using data presented on a line plot.



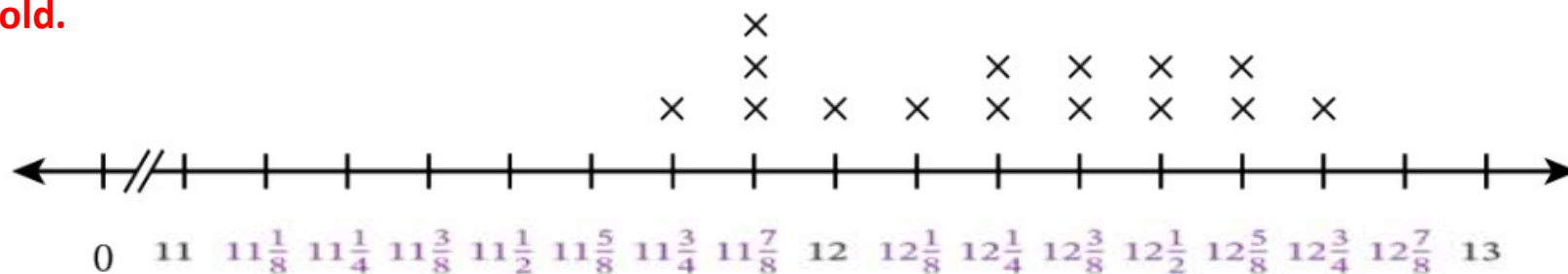
LEARN (35-min)

Solve Problems with Mixed Number Measurements

LEARN BOOK – PAGE 139 & 140

1. Mr. Sharma weighs each pumpkin he sells at his pumpkin farm. He records the data on a line plot.

Weights of Pumpkins Sold



What does each X on the line plot represent?

Each pumpkin sold.

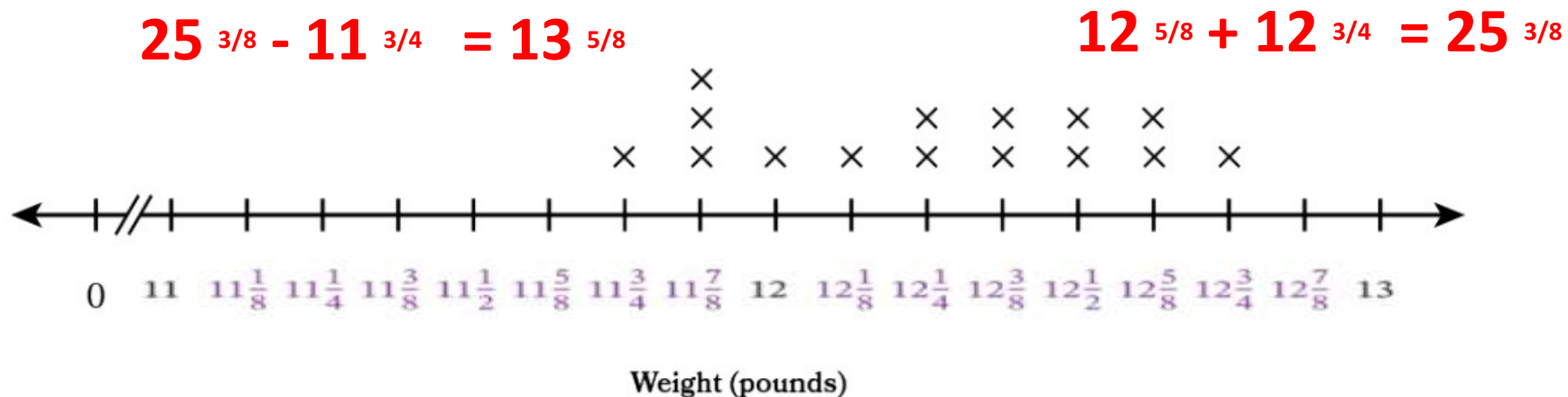
What interval or units does the number line show?

Eighths.

- a. How many pumpkins did Mr. Sharma sell? **15**
- b. What is the weight of the heaviest pumpkin? **$12\frac{3}{4}$ pounds**
- c. What is the most frequent weight of the pumpkins sold? **$11\frac{7}{8}$ pounds**
- d. What is the total weight of the two lightest pumpkins? **$11\frac{3}{4} + 11\frac{7}{8} = 23\frac{5}{8}$**

LEARN (35-min)**Solve Problems with Mixed Number Measurements****LEARN BOOK – PAGE 139 & 140**

1. Mr. Sharma weighs each pumpkin he sells at his pumpkin farm. He records the data on a line plot.

Weights of Pumpkins Sold

- e. How many pumpkins weigh at least $12 \frac{1}{4}$ pounds? **9**

- g. Julie bought two pumpkins that have a total weight of 25 pounds. Based on the data on the line plot, what could be the weights of Julie's pumpkins?

- f. Eddie bought the two heaviest pumpkins. Jada bought the lightest pumpkin. What is the difference in weight between Jada's pumpkin and the total weight of Eddie's pumpkins?

$13 \frac{5}{8}$ pounds

$12 \frac{1}{2} + 12 \frac{1}{2} = 25$

LEARN (35-min)

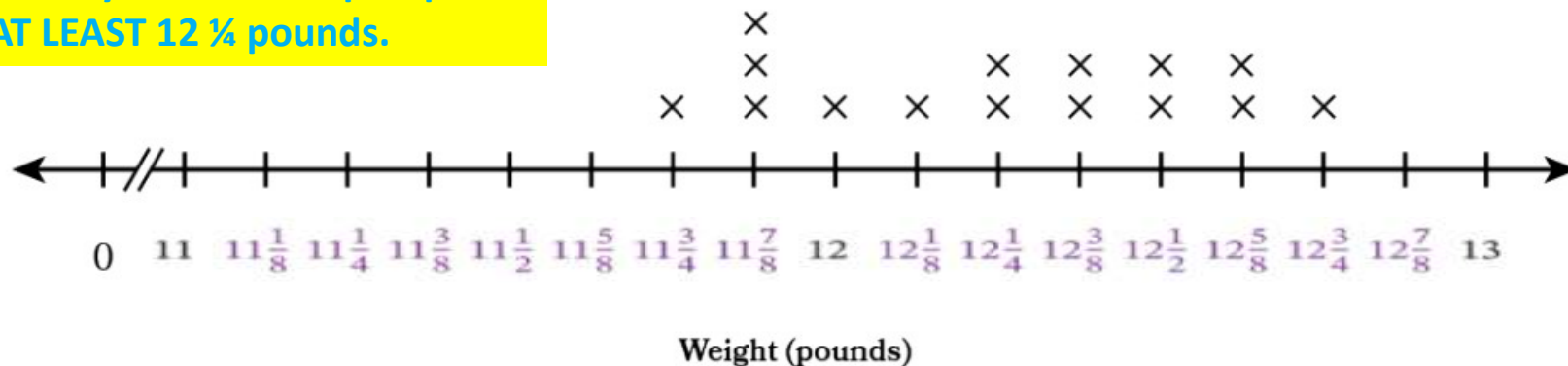
Solve Problems with Mixed Number Measurements

LEARN BOOK – PAGE 139 & 140

1. Mr. Sharma weighs each pumpkin he sells at his pumpkin farm. He records the data on a line plot.

Weights of Pumpkins Sold

Instead: We could say most of the pumpkins he sold weigh **AT LEAST** $12\frac{1}{4}$ pounds.



Mr. Sharma's claim: Most of the pumpkins I sold weigh more than $12\frac{1}{4}$ pounds.

No! The line plot does not support the claim. There are only 7 pumpkins out of 15 that weigh more than $12\frac{1}{4}$ pounds.

LEARN (35-min)

LEARN BOOK – PAGE 141

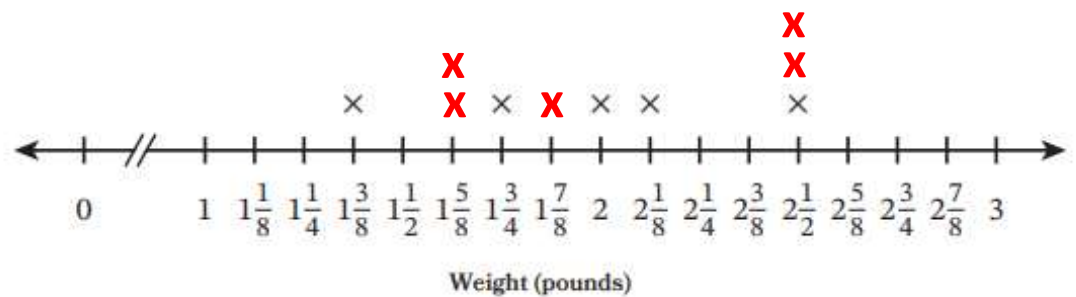
Solve Problems with Mixed Number Measurements

2. An animal clinic measures the weights of 10 kittens. The weights are recorded in the table.

Kitten	1	2	3	4	5	6	7	8	9	10
Weight (pounds)	$1\frac{3}{8}$	$2\frac{1}{2}$	$1\frac{3}{4}$	$2\frac{1}{8}$	2	$1\frac{7}{8}$	$2\frac{1}{2}$	$1\frac{5}{8}$	$2\frac{1}{2}$	$1\frac{5}{8}$

- a. Use the data values in the table that are not crossed off to complete the line plot.

Weights of Kittens



- b. Write three questions that can be answered by using the line plot.

What is the most frequent weight of the kittens? $2\frac{1}{2}$ pounds

What is the difference between the weights of the heaviest kitten and the lightest kitten?

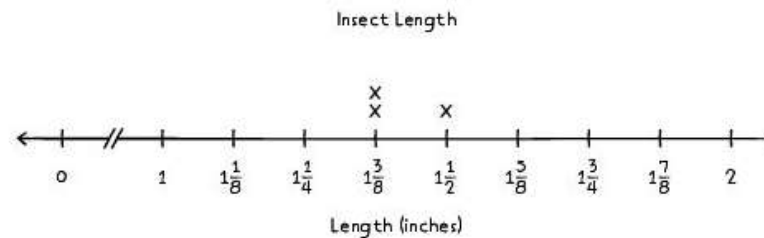
How many kittens are AT LEAST 2 pounds?



Sana measures the lengths of one type of insect for a class project. She begins to organize the data on a line plot but is unable to finish her work.

Insect	1	2	3	4	5	6	7	8	9	10	11
Length (inches)	$1\frac{1}{2}$	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{5}{8}$	$1\frac{3}{4}$	$1\frac{1}{8}$	$1\frac{1}{2}$	$1\frac{7}{8}$	$1\frac{5}{8}$	$1\frac{1}{4}$	2

- a. Use the data values in the table that are not crossed off to complete Sana's line plot.



- b. How much longer, in inches, is the longest insect than the shortest insect?

Exit Ticket – PAGE 149

Small Group Time:

Problem Set Pages 145 - 146

Homework:

Page 107 APPLY BOOK