

Name: _____ Date: _____

Stacey recorded the amount of time she spent studying after school each day to the nearest $\frac{1}{4}$ hour.

| Monday | Tuesday | Wednesday | Thursday | Friday |
|----------------|----------------|----------------|----------------|----------------|
| $1\frac{3}{4}$ | $2\frac{1}{4}$ | $2\frac{1}{4}$ | $1\frac{3}{4}$ | $2\frac{1}{2}$ |
| $1\frac{3}{4}$ | $2\frac{1}{2}$ | $2\frac{3}{4}$ | 2 | 1 |
| $1\frac{1}{4}$ | $2\frac{3}{4}$ | $2\frac{1}{2}$ | 2 | $1\frac{1}{2}$ |

1. Create a line plot to represent the data above. Make sure to include the title, label the number line and graph the data.
2. Which day (s) did she spend the most time studying after school?
3. How much time did she spend studying for at least $2\frac{1}{4}$ hours?
4. Stacey believes that she spends at 44 hours studying altogether after school each month. Do you agree with Stacey? Show your work below.
5. If Stacey redistributes her studying time after school equally over the month, how much time would she spend on a typical day after school studying?

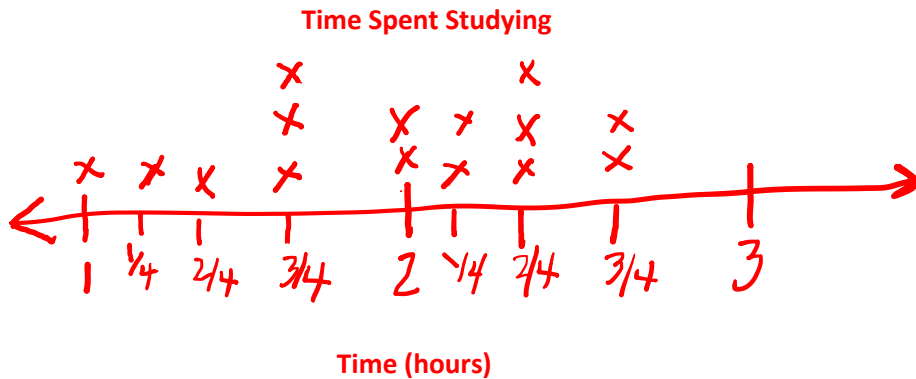
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$4\frac{3}{4}$ hrs $7\frac{1}{2}$ hrs $7\frac{1}{2}$ hrs $5\frac{3}{4}$ hrs 6 hrs

1. Create a line plot to represent the data above. Make sure to include the title, label the number line and graph the data.



2. Which day(s) did she spend the most time studying after school?

Through addition, it can be seen that the Stacey spent the most (equal) time on Tuesdays and Wednesdays studying. That comes out to $7\frac{1}{2}$ hours each.

3. How much time did she spend studying for more than $2\frac{1}{4}$ hours?

$$\left(2\frac{2}{4} \times 3\right) + \left(2\frac{3}{4} \times 3\right) = \frac{30}{4} + \frac{33}{4} = \frac{63}{4} = 15\frac{3}{4} \text{ hours}$$

4. Stacey believes that she spends at 44 hours studying altogether after school each month. Do you agree with Stacey? Show your work below.

To find out the combined time spent studying, we need to combine the total hours from the table or line plot above. $4\frac{3}{4} + 7\frac{1}{2} + 7\frac{1}{2} + 5\frac{3}{4} + 6 = 4 + 7 + 7 + 5 + 6 + (\frac{1}{2} + \frac{1}{2} + \frac{3}{4} + \frac{3}{4}) = 31\frac{1}{2}$ hours. Therefore, Stacey is incorrect. She actually spent $31\frac{1}{2}$ hours instead of 44 hours.

5. If Stacey redistributes her studying time after school equally over the month, how much time would she spend on a typical day after school studying?

$$31\frac{1}{2} \div 15 = \frac{63}{2} \div \frac{15}{1} = \frac{63}{2} \times \frac{1}{15} = \frac{63}{30} = 2\frac{1}{10} \text{ hours}$$