Graphing Student Progress and Data-Based Decision Making

Sofia is a first grade student. In January her school administered a reading fluency assessment as part of its regular screening process. Because her performance put her in the "some risk" category, her teachers decided to establish a baseline and monitor her progress every other week. Sofia's assessment data is below.

January
- Week 2, baseline data: 10, 12, 8
- Week 4: 13

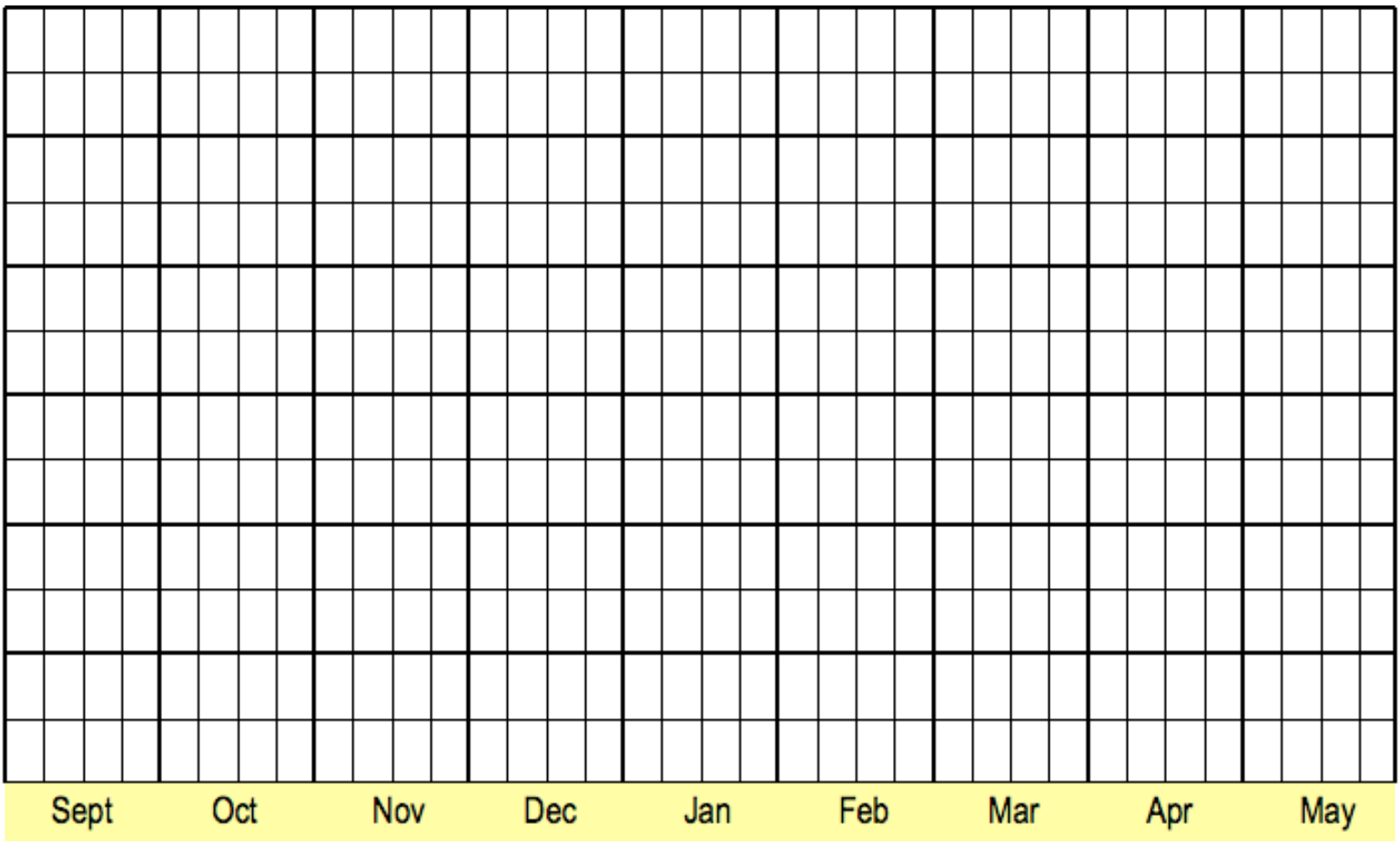
February
- Week 2: 11
- Week 4: 17

March
- Week 2: 26
- Week 4: 24

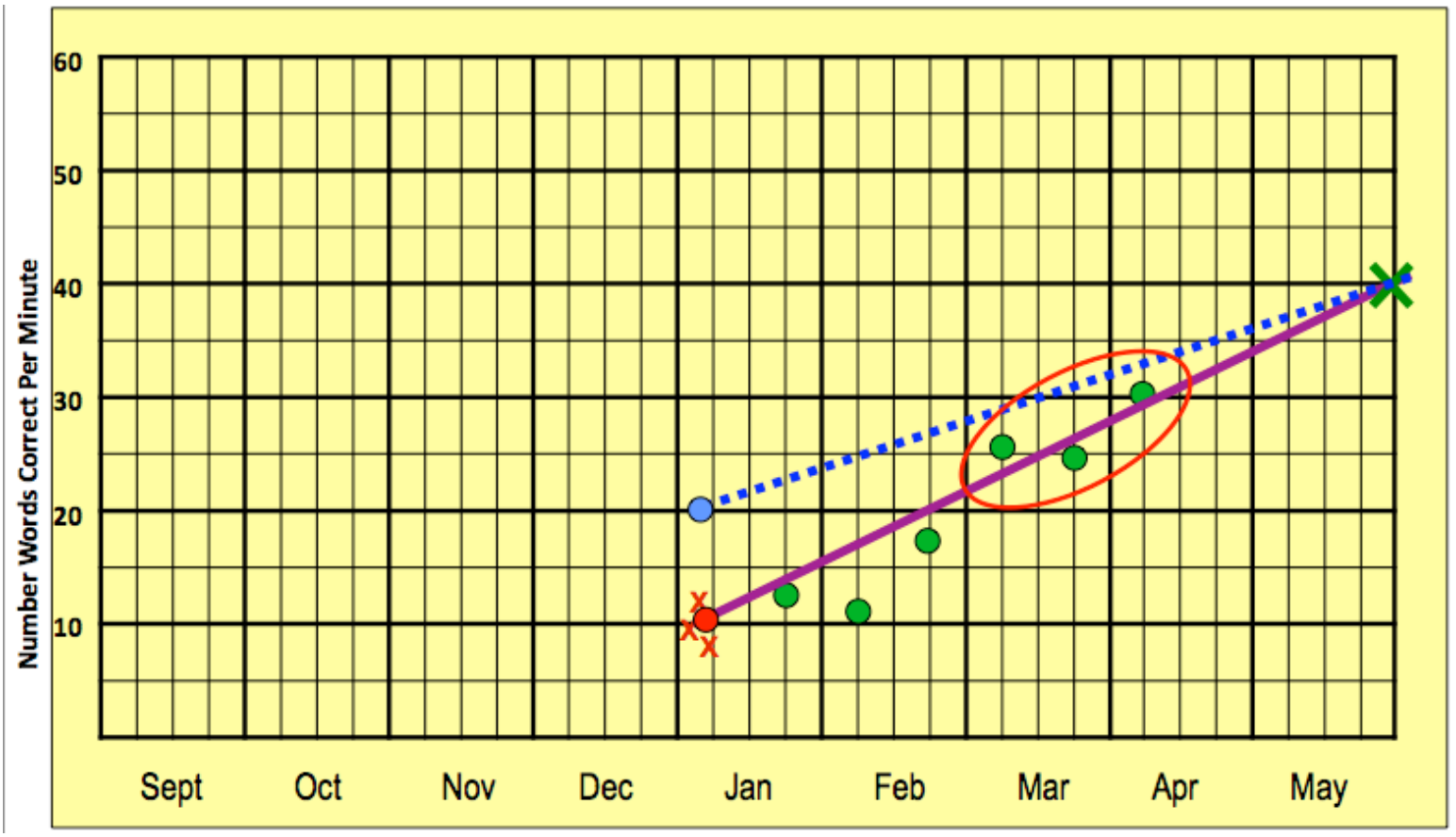
April
- Week 2: 30

Print out a graph included on the next page and practice graphing Sofia's data following the steps below, and answering the questions. Compare your graph and the answers to the questions to the completed graph and answers provided.

- Label the Y axis, using a scale that will capture the data. In this case each darker line represents a unit of 10.
- Plot the baseline data using small x's. Find the median score and mark it on the graph with a dot.
- Sofia's teacher chose an end-of-year goal of 40 words read correctly per minute. Put an "X" on the graph marking the intersection of 40 words per minute and the end of May. Draw the aimline by connecting the median baseline data point and the X.
- Plot the rest of the progress monitoring data.
- After the sixth data point is collected, Sofia's teacher reviews the graph and makes an instructional decision using the 3-point decision rule. What is the decision that Sofia's teacher makes? Why is it recommended to wait until at least six data points have been collected before making an instructional decision based on the data?
- What is the disadvantage of monitoring progress on a twice-monthly schedule? Why is it important to monitor the progress of high-risk students more frequently?
- (Optional) Would Sofia's teacher made the same instructional decision had she used the trend-line analysis rule (see the resource on trendline analysis for more information)?


Sept
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May

Answers:


Number Words Correct Per Minute
60
50
40
30
20
10
Sept
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May

- Label the Y axis, using a scale that will capture the data. In this case each darker line represents a unit of 10.

  Answer: See graph.

- Plot the baseline data using small x's. Find the median score and mark it on the graph with a dot.

  Answer: See graph.

- Sofia's teacher chose an end-of-year goal of 40 words read correctly per minute. Put an "X" on the graph marking the intersection of 40 words per minute and the end of May. Draw the aimline by connecting the median baseline data point and the X.

  Answer: See graph.

- Plot the rest of the progress monitoring data.

  Answer: See graph.

- After the sixth data point is collected, Sofia's teacher reviews the graph and makes an instructional decision using the 3-point decision rule. What is the decision that Sofia's teacher makes? Why is it recommended to wait until at least six data points have been collected before making an instructional decision based on the data?

  Answer: Sofia's teacher decides that the instruction Sofia is receiving is sufficient in order for Sofia to reach her end-of-year goal. She decides to make no instructional changes.
  Teachers should wait until six data points have been collected because of normal variability in the data. If an instructional decision would have been made after the third progress monitoring data point had been collected, Sofia's teacher may have decided to change her instruction when in fact she didn't need to.

- What is the disadvantage of monitoring progress on a twice-monthly schedule? Why is it important to monitor the progress of high risk students more frequently?

  Answer: Because Sofia's progress was monitored twice per month, the sixth data point was not collected until the second week in April, late in the school year. By monitoring more frequently teachers have the information they need to make instructional decisions sooner. It is important to monitor high risk students more frequently because it is much more likely that they will struggle and will need an instructional change in order to reach their goals.

- (Optional) Would Sofia's teacher made the same instructional decision had she used the trend-line analysis rule (see the resource on trendline analysis for more information)?

Answer: Including the baseline data, there are seven data points available, the minimum recommended for doing a trendline analysis. The trendline is slightly more positive (steeper) than the goal line. Based on this data, Sofia's teacher may decide to increase Sofia's goal.