

Track the Trend

Turn data into clear line graphs.

GRADE 4 • 4.PS.1.c

4.PS.1.c "Organize and represent a data set using line graphs with a title and labeled axes with whole number increments, with and without the use of technology tools."

NAME _____

DATE _____

BUILD A LINE GRAPH

Put time or order on the horizontal axis. Put the amounts on the vertical axis. Add a title and use equal whole-number steps on the vertical axis.

WORKED EXAMPLE

Make a line graph for stars seen:
Mon 7, Tue 14, Wed 21, Thu 28.

1. Title the graph "Stars Seen."
2. Label the x-axis Days and the y-axis Stars.
3. Label the y-axis 0, 7, 14, 21, 28.
4. Plot each day, then connect the points.

Answer: Line graph titled "Stars Seen" with points (Mon, 7), (Tue, 14), (Wed, 21), and (Thu, 28).

PRACTICE 5 problems

- 1** A y-axis is labeled 0, 5, 10, 15. What is the increment?

ANSWER _____

- 2** Put this data in day order: Thu 10, Mon 2, Wed 8, Tue 4.

ANSWER _____

- 3** Data show plant heights: Mon 4 cm, Tue 8 cm, Wed 12 cm. Write a graph title and both axis labels.

ANSWER _____

- 4** A point on a line graph is at Thursday and 16. What does the point show?

ANSWER _____

- 5** Make a line graph for game points: Mon 5, Tue 10, Wed 15, Thu 20. Use a y-axis that counts by 5.

ANSWER _____

APPLY IT Show your work

- 1** A gamer records levels completed: Mon 2, Tue 4, Wed 6, Thu 8, Fri 10. Make a line graph. Count by 2 on the y-axis.

WORK SPACE

ANSWER _____

- 2** Jalen tracks successful free throws: Mon 0, Tue 5, Wed 10, Thu 15, Fri 20. Make a line graph. Count by 5 on the y-axis.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A graph has y-axis labels 0, 5, 10, 15. It shows snack sales of 4, 8, and 12 by putting the points on 5, 10, and 15. Explain the error and give a better y-axis scale.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A y-axis is labeled 0, 5, 10, 15. What is the increment?	5
2	Put this data in day order: Thu 10, Mon 2, Wed 8, Tue 4.	Mon 2, Tue 4, Wed 8, Thu 10
3	Data show plant heights: Mon 4 cm, Tue 8 cm, Wed 12 cm. Write a graph title and both axis labels.	Title: Plant Heights. x-axis: Days. y-axis: Height (cm).
4	A point on a line graph is at Thursday and 16. What does the point show?	The amount was 16 on Thursday.
5	Make a line graph for game points: Mon 5, Tue 10, Wed 15, Thu 20. Use a y-axis that counts by 5.	Line graph titled "Game Points" with x-axis Days, y-axis Points, y-axis labels 0, 5, 10, 15, 20, and points (Mon, 5), (Tue, 10), (Wed, 15), (Thu, 20).

PART 2 • APPLY IT

- Line graph titled "Levels Completed" with x-axis Days, y-axis Levels, y-axis labels 0, 2, 4, 6, 8, 10, and points (Mon, 2), (Tue, 4), (Wed, 6), (Thu, 8), (Fri, 10).** Use days in order on the x-axis. The y-axis counts by 2 because each amount is a multiple of 2.
- Line graph titled "Successful Free Throws" with x-axis Days, y-axis Free Throws, y-axis labels 0, 5, 10, 15, 20, and points (Mon, 0), (Tue, 5), (Wed, 10), (Thu, 15), (Fri, 20).** Use the equal steps 0, 5, 10, 15, and 20 on the y-axis. Plot one point for each day and connect the points.

CHALLENGE

The points are in the wrong places because 4, 8, and 12 are not 5, 10, and 15. Use y-axis labels 0, 4, 8, 12, with an increment of 4.

Accept sensible equivalent titles and axis labels. Accept any equal whole-number scale that includes all data values and places each point correctly.