

Line Graph Detectives

Find changes and totals from graph data.

GRADE 4 • 4.PS.1.d.v

4.PS.1.d.v "Analyze data represented in line graphs and communicate results orally and in writing: solve single-step and multistep addition and subtraction problems using data from line graphs."

NAME _____

DATE _____

TRACK THE CHANGE

Read the values at the points you need. Subtract to find a difference, or add changes to find a total change.

WORKED EXAMPLE

A line graph shows seeds sprouted:
A 4, B 7, C 11. How many more
seeds sprouted on C than on A?

1. From A to B: $7 - 4 = 3$.
2. From B to C: $11 - 7 = 4$.
3. Add the changes: $3 + 4 = 7$.

Answer: 7 seeds

PRACTICE 5 problems

- 1** PRACTICE. A line graph shows birds seen: Mon 6, Tue 9, Wed 10. How many more birds were seen on Wed than Mon?

ANSWER _____

- 2** A line graph shows laps run: A 2, B 5, C 8. How many laps were run on A and C altogether?

ANSWER _____

- 3** A line graph shows temperature: A 12, B 9, C 3. How many fewer degrees was C than A?

ANSWER _____

- 4** A line graph shows cans collected: A 5, B 8, C 10. How much did the number collected increase from A to C?

ANSWER _____

- 5** A line graph shows points scored: A 3, B 6, C 9, D 12. Add each increase from A to B, B to C, and C to D. What is the total increase?

ANSWER _____

APPLY IT Show your work

- 1** APPLY. A gaming club's line graph shows visitors: Fri 8, Sat 12, Sun 15, Mon 9. Add the rise from Fri to Sun and the drop from Sun to Mon. What total change is that?

WORK SPACE

ANSWER _____

- 2** A line graph shows books on a swap shelf: before lunch 14, after lunch 9, end of day 17. How many books were added after lunch? How many more were added than removed?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

CHALLENGE. A line graph shows game scores: A 16, B 22, C 19, D 25. How much did the score change from A to D? Explain by using each change between points.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	PRACTICE. A line graph shows birds seen: Mon 6, Tue 9, Wed 10. How many more birds were seen on Wed than Mon?	4 birds
2	A line graph shows laps run: A 2, B 5, C 8. How many laps were run on A and C altogether?	10 laps
3	A line graph shows temperature: A 12, B 9, C 3. How many fewer degrees was C than A?	9 degrees
4	A line graph shows cans collected: A 5, B 8, C 10. How much did the number collected increase from A to C?	5 cans
5	A line graph shows points scored: A 3, B 6, C 9, D 12. Add each increase from A to B, B to C, and C to D. What is the total increase?	9 points

PART 2 • APPLY IT

- 13 people** The rise is $15 - 8 = 7$ people. The drop is $15 - 9 = 6$ people, and $7 + 6 = 13$.
- 8 books were added; 3 more books were added than removed.** Five books were removed, $14 - 9 = 5$. Eight books were added, $17 - 9 = 8$, so $8 - 5 = 3$.

CHALLENGE

The score changed by 9 points. It rose 6, fell 3, and rose 6, so $6 + 6 - 3 = 9$.

Accept correct numerical answers with matching units. For the challenge, accept an explanation that adds the increases and subtracts the decrease.