

Graph Trend Detectives

Read data patterns, draw conclusions, and predict what comes next.

GRADE 4 • 4.PS.1.d.iv

4.PS.1.d.iv "Analyze data represented in line graphs and communicate results orally and in writing: draw conclusions about the data and make predictions based on the data to answer questions; and"

NAME _____

DATE _____

You will need: Pencil

SPOT THE TREND

Read time along the bottom axis and the measured amount on the side axis. Filled dots show observations, joined in time order by straight segments. Compare changes to describe a trend. A prediction assumes the pattern continues; it is not an observed fact. Explain conclusions using values from the graph.

WORKED EXAMPLE

The graph shows items collected over three days. If the pattern continues, how many items might be collected on Thursday?

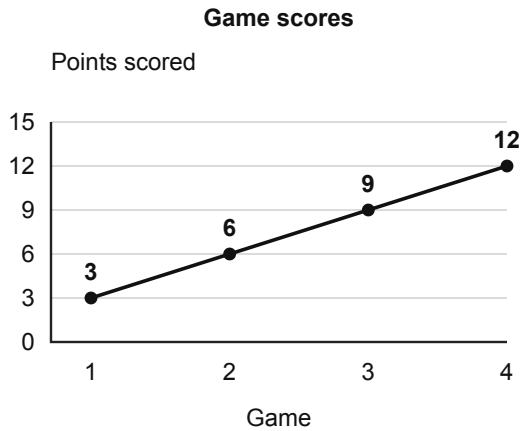
1. Read the values: 11, 15, and 19.
2. Find each change: $15 - 11 = 4$ and $19 - 15 = 4$.
3. Add 4 to 19: $19 + 4 = 23$.

Answer: 23 items is a reasonable prediction if the increase of 4 items per day continues.



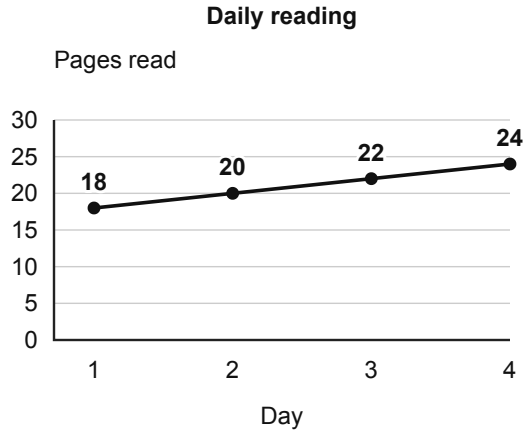
PRACTICE 6 problems

- 1** Read the game scores. How many more points were scored in Game 4 than in Game 1?



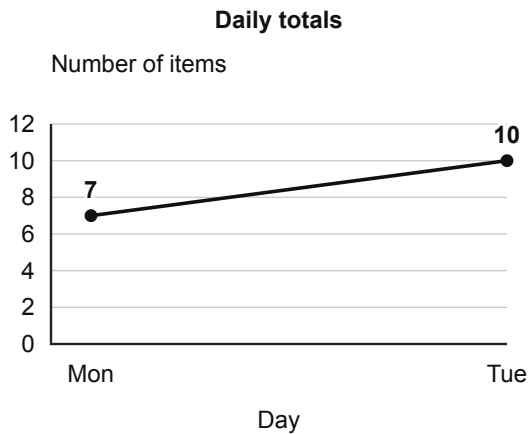
ANSWER _____

- 2** Read the pages graph. If the pattern continues, predict the pages read on Day 5.



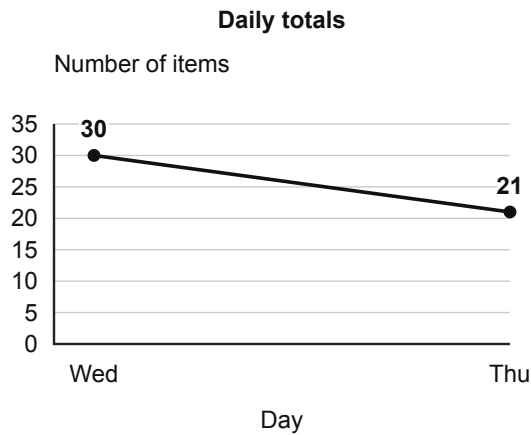
ANSWER _____

- 3** Read the daily totals. What is the change from Monday to Tuesday?



ANSWER _____

- 4** Read the daily totals. Write a conclusion about the change from Wednesday to Thursday.



ANSWER _____

- 5** Read the repeating pattern. If it continues, predict the value on Day 5.



ANSWER _____

- 6** Read the falling totals. If the pattern continues, predict the value on Day 4.

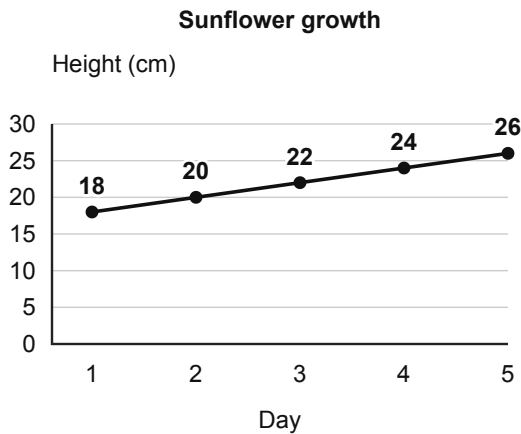


ANSWER _____

APPLY IT Show your work

1

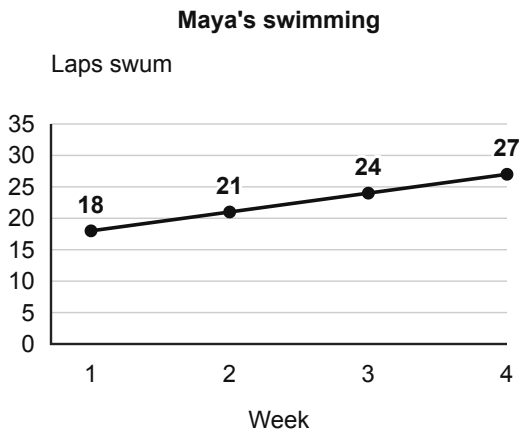
The garden club measured this sunflower daily. Use the graph to state its daily growth. Predict its Day 6 height if the pattern continues.



ANSWER _____

2

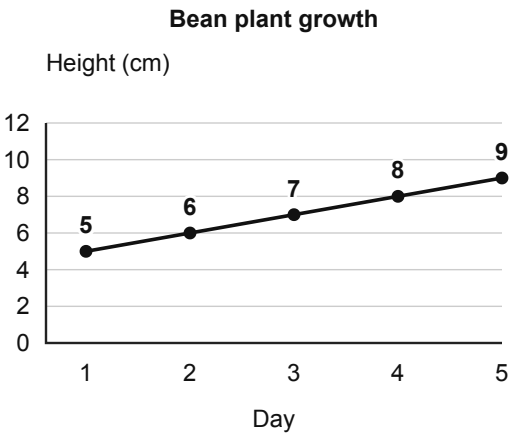
Maya recorded her weekly swim laps. Write a conclusion and predict Week 5 if the pattern continues. Then tell a partner both, using two graph values as evidence.



ANSWER _____

CHALLENGE One step up

Use the bean plant graph. If the pattern continues, predict its height on Day 6. How much taller would that be than on Day 3? Explain your reasoning.



PRACTICE 1

Read the game scores. How many more points were scored in Game 4 than in Game 1?

9 more points

PRACTICE 2

Read the pages graph. If the pattern continues, predict the pages read on Day 5.

26 pages

PRACTICE 3

Read the daily totals. What is the change from Monday to Tuesday?

An increase of 3

PRACTICE 4

Read the daily totals. Write a conclusion about the change from Wednesday to Thursday.

The data decreased by 9 from Wednesday to Thursday.

PRACTICE 5

Read the repeating pattern. If it continues, predict the value on Day 5.

5

PRACTICE 6

Read the falling totals. If the pattern continues, predict the value on Day 4.

25

APPLY IT 1

It grew 2 cm each day. It will likely be 28 cm tall on Day 6. Compare consecutive heights to see that each height is 2 cm greater. Add 2 cm to the Day 5 height of 26 cm.

APPLY IT 2

The number of laps increased by 3 each week. Maya will likely swim 30 laps in Week 5. The lap total rises by 3 from one week to the next. Continue the pattern by adding 3 to 27.

CHALLENGE

The plant will be 10 cm tall on Day 6. It will be 3 cm taller than on Day 3 because the height increases by 1 cm each day, and $10 - 7 = 3$.

Accept equivalent wording for increases, decreases, and predictions when the numerical result is correct. For written conclusions, accept a clear statement that names the direction and amount of change. Predictions assume the observed pattern continues; accept conditional wording rather than certainty. For the oral explanation, listen for a conclusion, a prediction, and supporting graph values (for example, 18 and 21 laps show the increase of 3). Filled dots are observations only; future values are not supplied as data.