Varied Fluency
Step 5: Introducing Line Graphs

National Curriculum Objectives:

Mathematics Year 4: (4S1) Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs
Mathematics Year 4: (4S2) Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs

Differentiation:

Developing Questions to introduce line graphs and continuous data using up to 3 recordings per graph, with increments of 1 or 2 on the y axis.
Expected Questions to introduce line graphs and continuous data using up to 5 recordings per graph, with increments of 1, 2 or 10 on the y axis, where most recordings are directly in line with the marked increments.
Greater Depth Questions to introduce line graphs and continuous data using up to 5 recordings per graph, with increments of 1, 2 or 10 on the y axis, where not all increments are marked and where recordings are sometimes between marked increments.
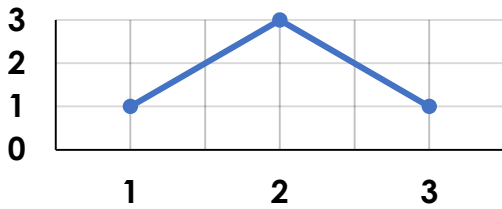
More Year 3 and Year 4 Statistics resources.

Did you like this resource? Don't forget to review it on our website.

Introducing Line Graphs

1a. What is missing?

Height of a Ball Throw

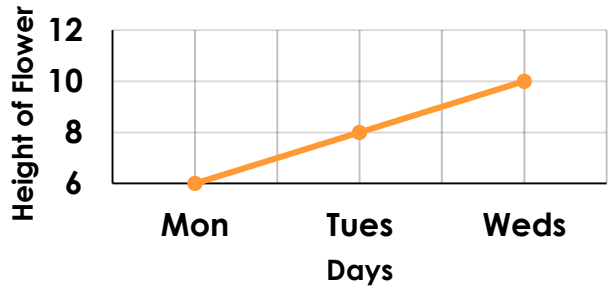Use the checklist to make sure the line graph has all items:

- ☐ Title
- ☐ Axis Labels
- ☐ Scales

4 VF

1b. What is missing?

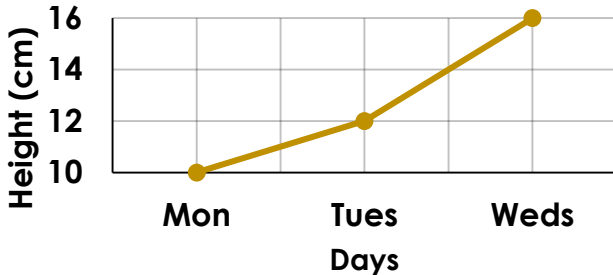Use the checklist to make sure the line graph has all items:

- ☐ Title
- ☐ Axis Labels
- ☐ Scales

4 VF

2a. Use the line graph to fill the gaps.

Height of a Beanstalk
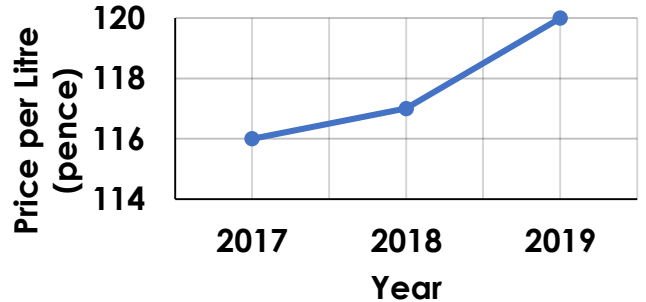

The beanstalk grew the most from _____ to _____ .

4 VF

2b. Use the line graph to fill in the gaps.

Cost of Petrol
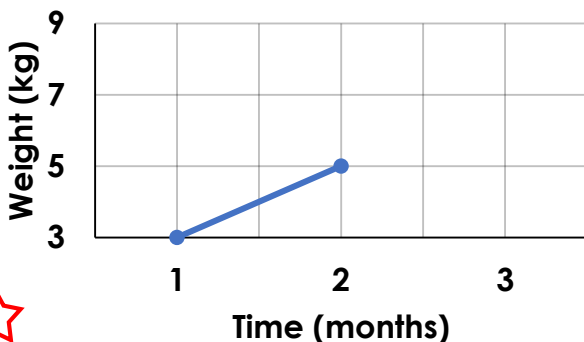

In 2019 petrol cost _____.

In 2017 petrol cost _____.

4 VF

3a. Use the data to complete the line graph.

1 month	2 months	3 months
3	5	7

Baby Aisha's Weight

4 VF

3b. Use the data to complete the line graph.

7pm	9pm	11pm
3°	2°	1°

Evening Temperatures
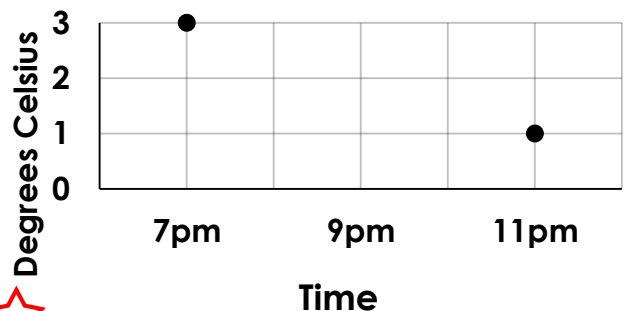
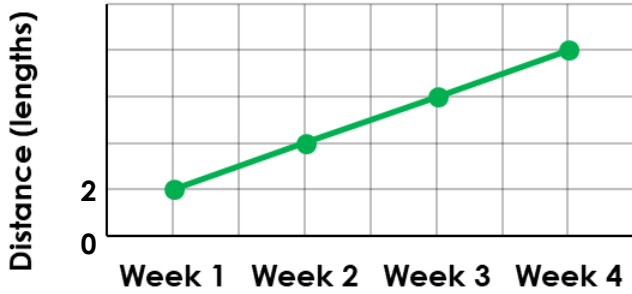

4 VF

Introducing Line Graphs

Introducing Line Graphs

4a. What is missing?

Distance Swum

Use the checklist to make sure the line graph has all items:
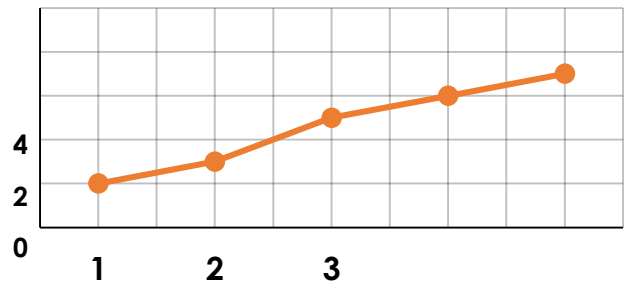- ❑ Y Axis Label
- ❑ X Axis Label
- ❑ Scales

4 VF

4b. What is missing?

Xander's Height

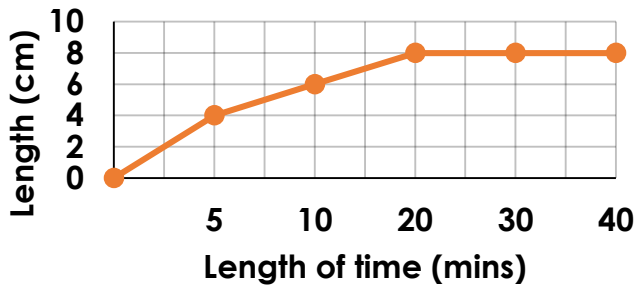Use the checklist to make sure the line graph has all items:
- ❑ Title
- ❑ Axis Labels
- ❑ Scales

4 VF

5a. Use the line graph to fill in the gaps.

Length of Knitting
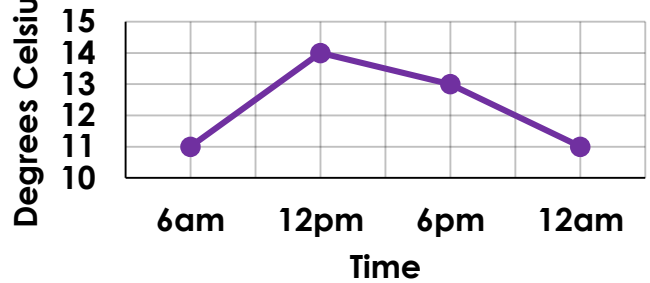

After 10 minutes the knitting was _____cm long. The knitting was 8cm long after _____ minutes.

4 VF

5b. Use the line graph to fill in the gaps.

Temperature

By 12pm the temperature had risen to _____ .
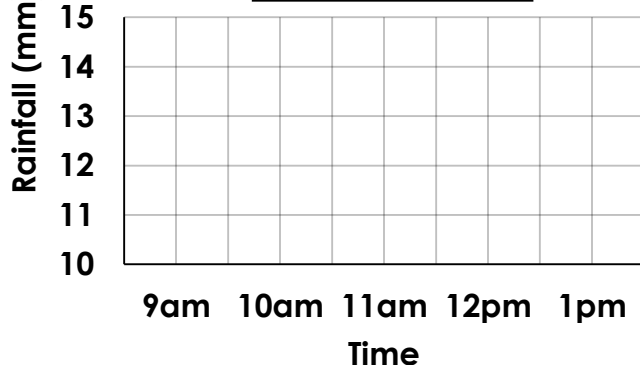
By 12am the temperature had dropped to _____

4 VF

6a. Use the data to complete the line graph.

9am	10am	11am	12pm	1pm
10	30	45	40	50

Amount of Rainfall

4 VF

6b. Use the data to complete the line graph.

1km	2km	3km	4km	5km
10	25	30	40	50

Distance Walked

4 VF

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Varied Fluency – Introducing Line Graphs – Year 4 Expected

Introducing Line Graphs
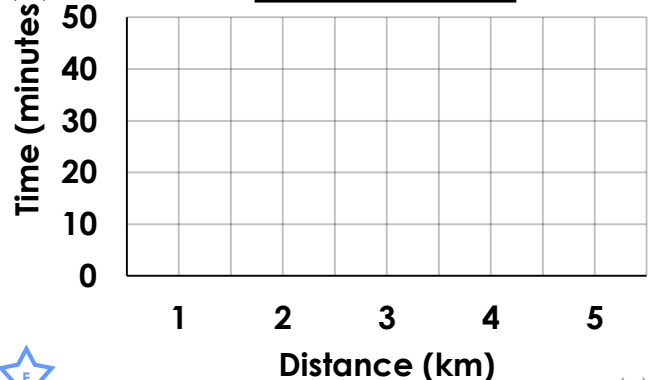
Introducing Line Graphs

7a. What is missing?

Height of a Sunflower
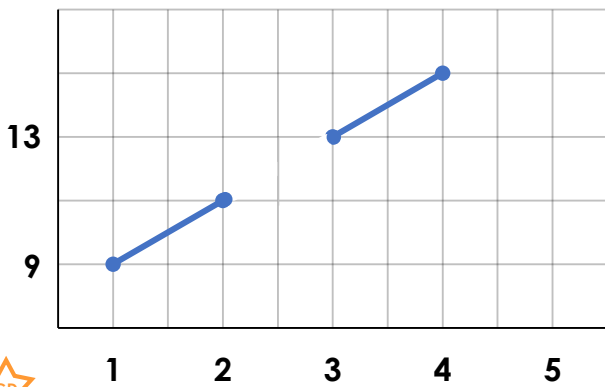
7b. What is missing?

Cat's Weight

GD 4 VF
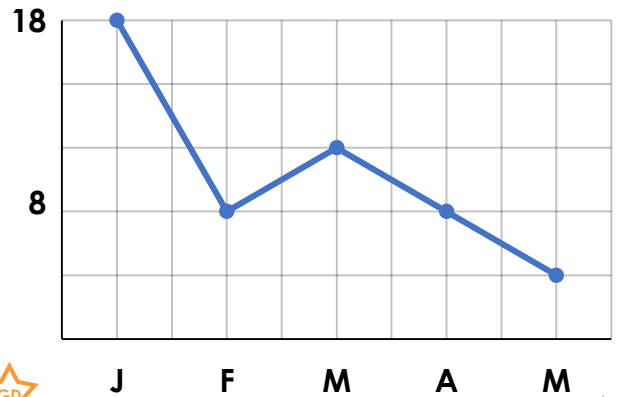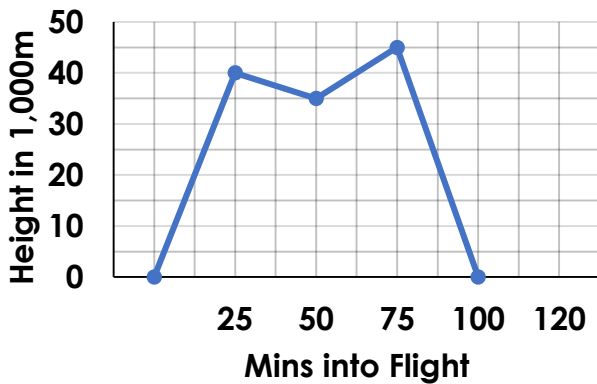
GD 4 VF

8a. Use the line graph to fill in the gaps.

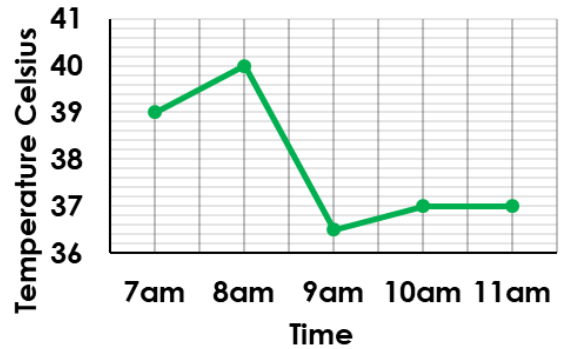### Height of Plane During a Flight

The flight lasted _____ mins. The plane reached a height of _____ m.

GD 4 VF

8b. Use the line graph to fill in the gaps.

Patient's Temperature

The patient's temperature at 8.30am was _____ °C. Between 8am and 9am the temperature dropped by _____ °C.

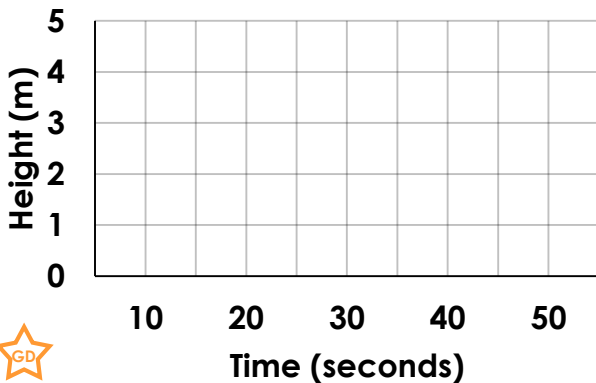GD 4 VF

9a. Use the data to complete the line graph.

Height (m)	1	2	3	2	1
Time (sec)	10	20	30	40	50

Height of a Football Kick

GD 4 VF

9b. Use the data to complete the line graph.

Week	1	2	3	4	5
Distance (m)	7	14	30	38	45

Length of Paving Laid

GD 4 VF

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Varied Fluency – Introducing Line Graphs – Year 4 Greater Depth
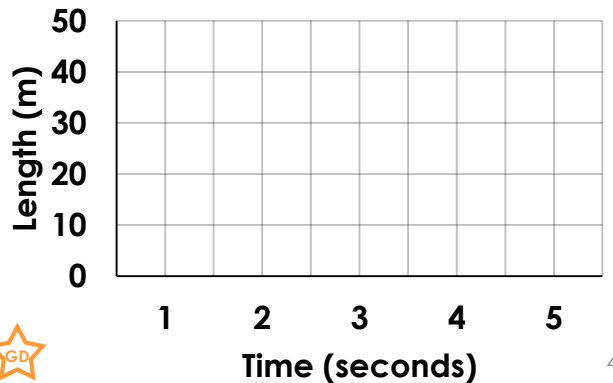
Varied Fluency
Introducing Line Graphs

Developing

1a. The axis labels are missing.
2a. Tuesday to Wednesday
3a. Line from 5kg to 7kg.

Expected

4a. The label for the x-axis and the scales on the y-axis are missing.
5a. 6cm, 20minutes
6a. Line graph that accurately represents the data given.

Greater Depth

7a. The line should be continuous through all points on the chart. The axis labels are missing and there are values missing on the scale.
8a. 100 minutes, 45,000m.
9a. Line graph that accurately represents the data given.

Varied Fluency
Introducing Line Graphs

Developing

1b. The title is missing.
2b. 120p, 116p
3b. The data for 9pm accurately plotted and straight lines connecting the points accurately.

Expected

4b. The axis labels and some values are missing on the scales.
5b. 14°C, 11°C
6b. Line graph that accurately represents the data given.

Greater Depth

7b. The axis labels and some values are missing.
8b. 38°C, 3.5^{o}C
9b. Line graph that accurately represents the data given.