

Stage 6 Cambridge Primary Mathematics Practice Worksheet

Thursday 20 August 2026

Syllabus Focus: Objective 6Ss.04 — Interpreting Data, Patterns, Sources of Variation, & Predictions

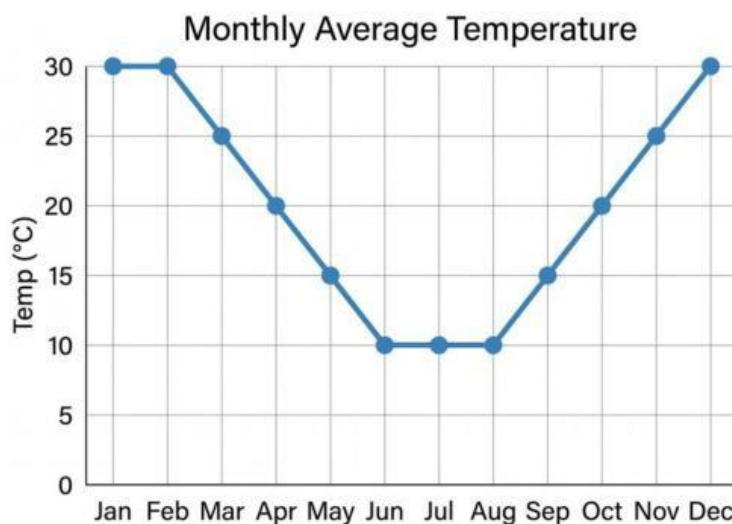
TWM Focus: TWM.03 (Conjecturing) & TWM.04 (Convincing)

Time Allowed: 30 Minutes | **Total Marks:** 20 Marks

Section A: Interpreting Patterns Within a Data Set

Question 1 [2 Marks]

Study the line graph below showing the monthly average temperature in a city across 12 months:



(a) Identify the two months with the lowest recorded average temperature. [1]

Answer: _____

(b) Describe the overall pattern in temperature from January through to July. [1]

Answer: _____

Question 2 [2 Marks]

A dot plot records the number of books read by 20 Stage 6 learners during a school holiday:

Books Read: 0 (..) 1 (.....) 2 (.....) 3 (....) 4 (.)

(a) What fraction of the learners read **fewer than 2 books**? [1]

Answer: _____

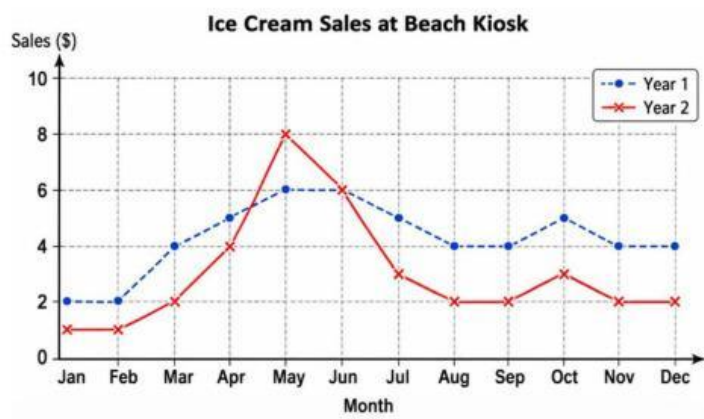
(b) What is the median number of books read by these learners? [1]

Answer: _____

Section B: Comparing Between Two Data Sets

Question 3 (TWM.03 Conjecturing & TWM.04 Convincing) [2 Marks]

The graph below compares monthly ice cream sales (*in thousands*) for a beach kiosk across two consecutive years (**Year 1** vs. **Year 2**):



(a) State one similarity between the patterns shown by Year 1 and Year 2. [1]

Answer: _____

(b) Form a conjecture to explain why sales in Year 2 dropped sharply in June and July compared to Year 1. [1]

Answer: _____

Question 4 [2 Marks]

A teacher recorded the spelling test scores of two different groups of 10 learners (Group A and Group B). Both groups took the same test out of 20 marks:

- **Group A scores:** 12,13,13,14,14,15,15,16,16,17 (Mean = 14.5)
- **Group B scores:** 5,8,10,14,15,16,19,20,20,20 (Mean = 14.7)

(a) Which group showed greater **variation** (spread) in their test scores? [1]

Answer: _____

(b) Why is comparing only the mean scores misleading when deciding which group performed more consistently? [1]

Answer: _____

Section C: Sources of Variation & Evaluating Secondary Data

Question 5 [2 Marks]

Chipo wants to find out how many hours of television Grade 6 children watch on weekends across her whole country. She downloads a survey table created by a local toy shop 5 years ago.

(a) Is Chipo using **Primary Data** or **Secondary Data**? [1]

Answer: _____

(b) Give one reason why this secondary data might not provide an accurate or reliable answer to her question today. [1]

Answer: _____

Question 6 (TWM.04 Convincing) [2 Marks]

A hospital recorded the number of patient visits to an emergency room over 7 days:

Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Visits	42	40	41	43	45	88	92

(a) Identify the outlier (unusual spike) in this data set. [1]

Answer: _____

(b) Convince a classmate why excluding the weekend data would give a more realistic prediction for weekday staffing needs. [1]

Answer: _____

Section D: Checking Predictions & Misconceptions**Question 7 (Misconception Check) [2 Marks]**

Farai reads a news article showing a graph where plant growth increases every week for 4 weeks. He predicts: "This plant will grow at this exact same rate forever."

(a) Explain the error in Farai's reasoning. [1]

(b) What source of natural variation or biological limit will affect his prediction? [1]

Question 8 [2 Marks]

A school collected data on the time taken (minutes) for learners to complete a cross-country run in dry weather versus rainy weather:

Dry Weather: 15, 16, 17, 18, 18, 19, 20, 21

Rainy Weather: 18, 19, 20, 21, 22, 23, 24, 25

(a) Calculate the difference between the median times of the two weather conditions. [1]

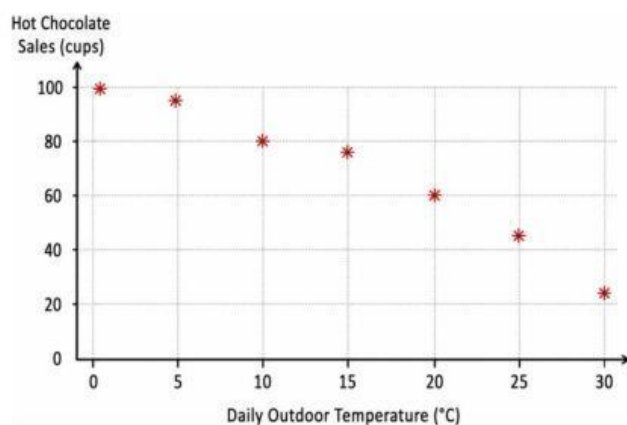
Answer: _____ minutes

(b) What conclusion can you draw about how rainy weather affects running times? [1]

Answer: _____

Question 9 (TWM.03 Conjecturing) [2 Marks]

Look at the scatter graph showing the relationship between **Daily Outdoor Temperature (°C)** and **Hot Chocolate Cups Sold** at a cafe:



(a) Describe the relationship between temperature and hot chocolate sales. [1]

Answer: _____

(b) Form a conjecture for what will happen to hot chocolate sales if the temperature drops to 0°C. [1]

Answer: _____

Question 10 (Statistical Enquiry / TWM.04) [2 Marks]

Anita predicts that taller learners in Stage 6 will always be able to jump further in a standing long jump test than shorter learners.

She collects data from 10 classmates:

- 4 tall learners jump between 110 cm and 140 cm.
- 4 shorter learners jump between 120 cm and 150 cm.
- 2 medium-height learners jump 100 cm and 135 cm.

Using this evidence, **convince Anita** whether her original prediction was correct or incorrect. [2]