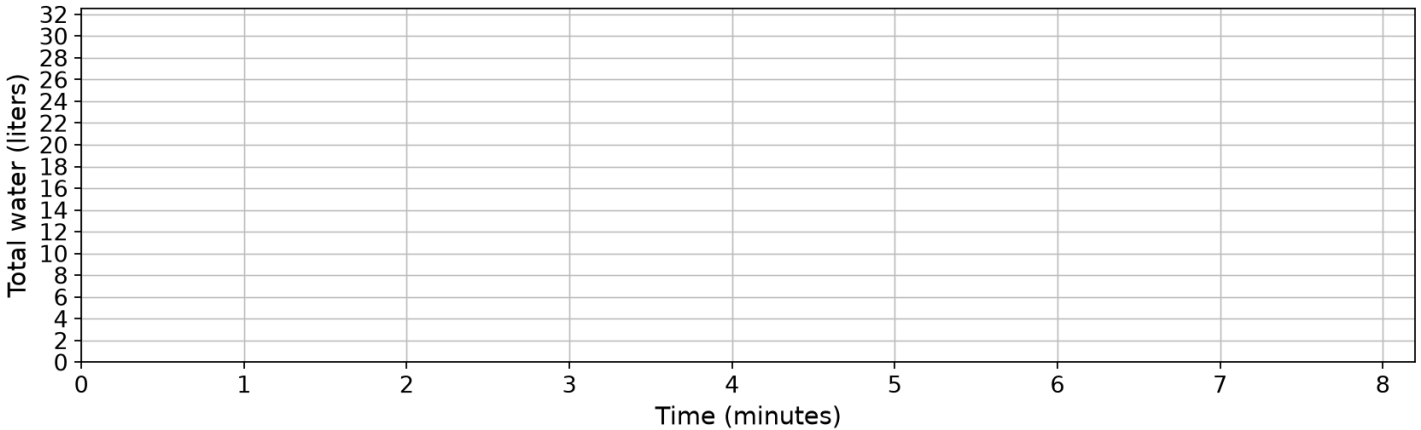


Linear Relationships Independent Check

1 Construct and interpret a linear model

A supplied continuous linear model of total water V is valid for $0 \leq t \leq 8$ minutes. It gives $(2, 10.5)$ and $(6, 19.5)$, with minutes first and liters second. Find the signed change rate and total at zero. Write a rule, verify both points and complete the table. Explain whether total water is proportional to time.

Time (minutes)	Total water (liters)
0	
2	10.5
6	19.5
8	



Rule, units and proportionality explanation; plot or describe points

Linear Relationships Independent Check

2 Compare; 3 state the condition

2 A different supplied model

Over the same 0-to-8-minute domain, $W = 3t + 1.5$ gives another total in liters. Which model, V or W, has the greater change rate? Compare their totals at minute 1 and minute 8. Find when they are equal and qualify the claim “The greater rate always gives the greater total.”

Your comparisons and equality

3 If only the two observations were known

In problem 1 the relationship was explicitly supplied as linear over its domain. If only its two observations were supplied, would those observations alone establish the same value at minute 8? Explain what additional assumption would support your calculated prediction.

What the two observations do and do not establish
