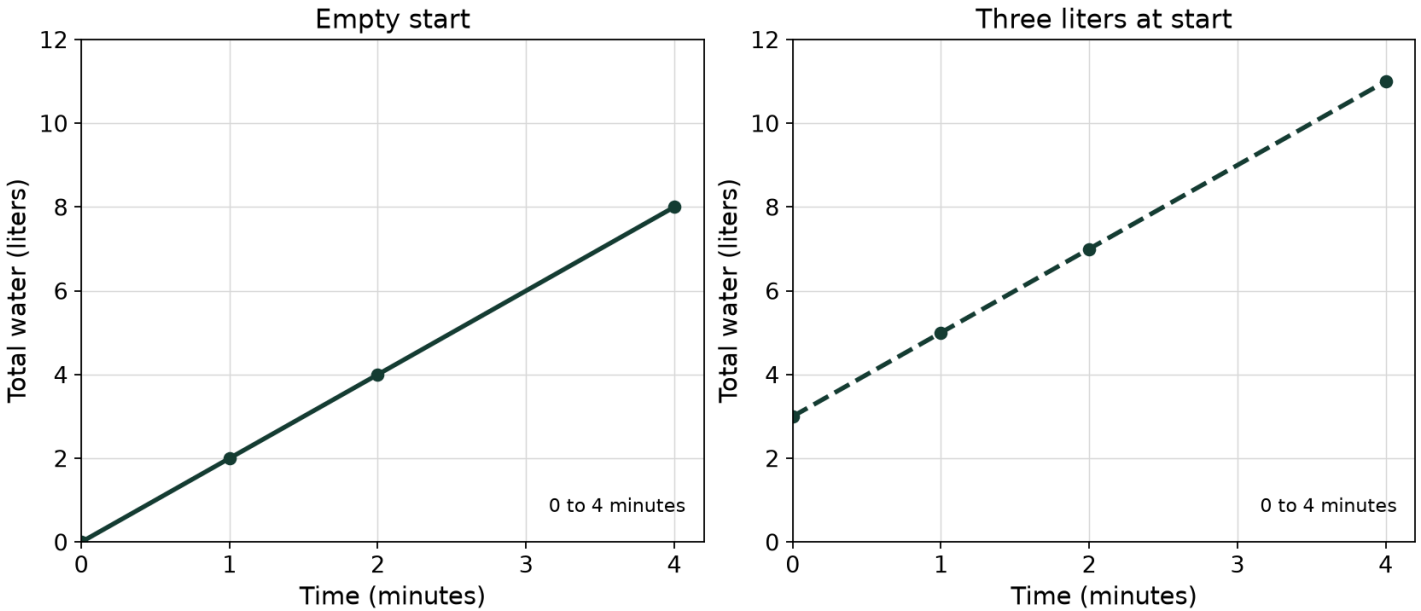


Connect Table Rule and Graph

Learn points say which quantities go together

Write a point as (x, y): input first, output second. On these graphs, time is horizontal and total water is vertical. The origin is (0, 0). A proportional graph is a straight line through the origin over its allowed inputs. A straight line with a nonzero starting value is not proportional.

For 0 to 4 minutes, Empty start has $y = 2 \times x$. Three liters at start has $y = 2 \times x + 3$. Both gain 2 liters each minute, but their total-water relationships differ.



Time (minutes)	Empty start (liters)	Three liters at start (liters)
0	0	3
1	2	5
2	4	7
4	8	11

In the empty-start model, (1, 2) means 2 liters after 1 minute: k is 2 liters per minute. In the other model, (1, 5) includes the starting 3 liters. The output at one input unit is not its rate of increase.

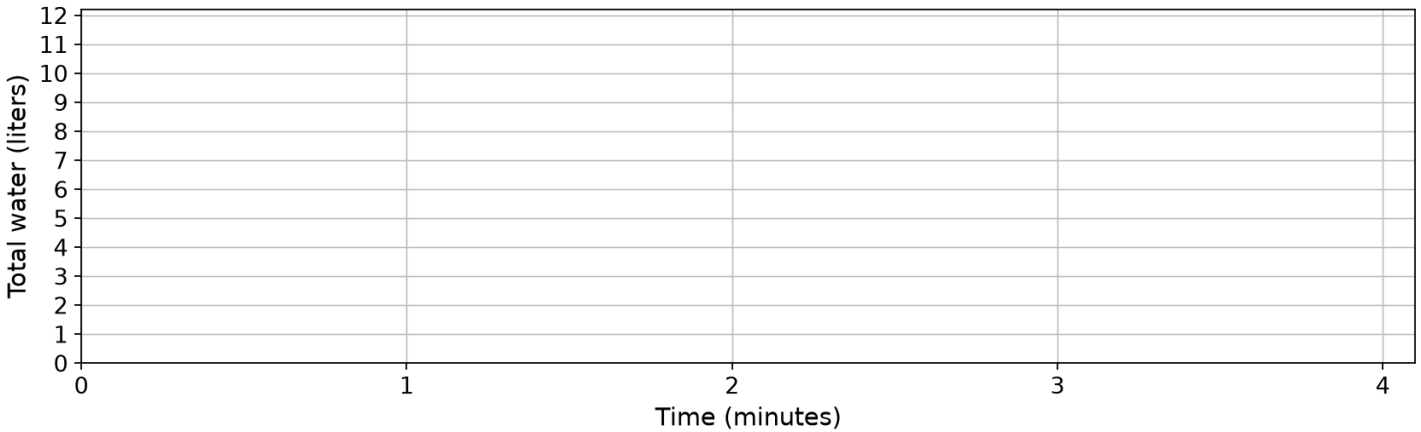
Connect Table Rule and Graph

Guided practice a fractional constant

An empty tank gains 1.5 liters each minute, for 0 to 4 minutes. Let x be time in minutes and y be total water in liters.

x (minutes)	y (liters)
0	
1	
2	
4	

Complete the table. State k as a decimal or fraction with units and write a rule. On the supplied grid plot the four pairs; join them only within the stated continuous-time domain. Explain $(0, 0)$ and the point at one minute.



Rule, units and point meaning

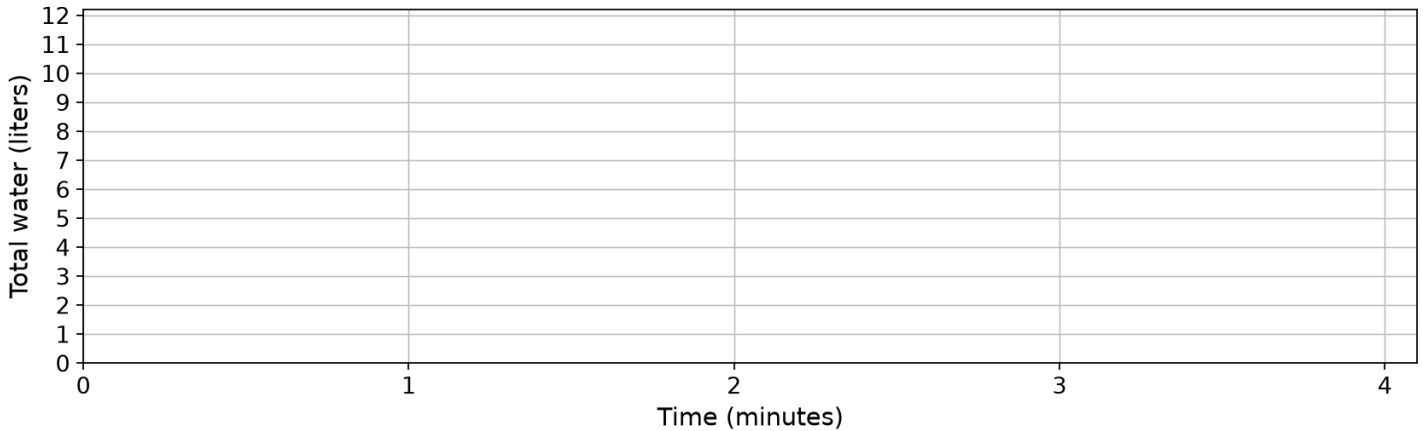
Connect Table Rule and Graph

Practice check a straightline shortcut

For 0 to 4 minutes, a different tank begins with 2 liters and gains 2 liters each minute.

Time (minutes)	Total water (liters)
0	2
1	4
2	6
4	10

Fictional learner Ari says, “The graph is straight and passes through (1, 4), so total water is proportional to time with $k = 4$ liters per minute.” Plot or describe the given pairs. Decide whether the claim and proposed rule $y = 4 \times x$ fit. Give a rule matching the stated model and explain the starting point.



Evidence, rule and point explanation
