Graphing simple relationships

6 questions | 15 marks

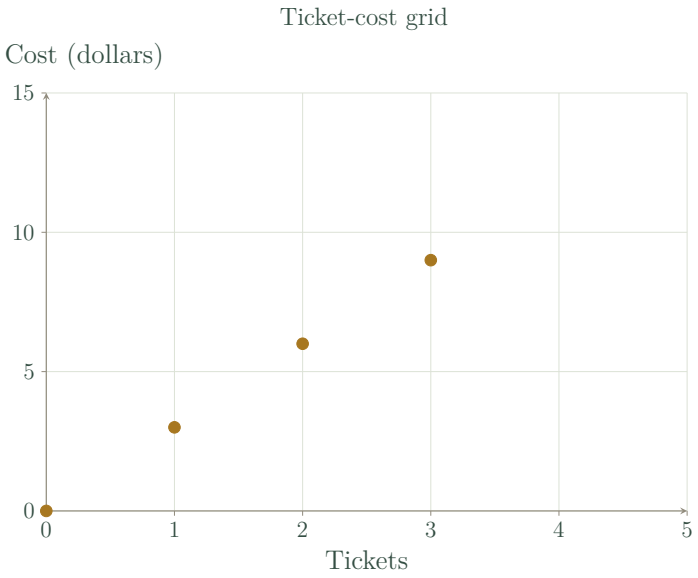
Equivalent correct methods earn the corresponding marks.

1. For $C = 3n$, find costs for 0,1,2,3 tickets. [2 marks]

Multiply each count by 3.

Answer: 0,3,6,9 dollars.

2. Plot the pairs for $C = 3n$ at $n = 0, 1, 2, 3$. [3 marks]



Label tickets on the horizontal axis and dollars vertically.

Only whole-ticket inputs are allowed.

Answer: $(0, 0), (1, 3), (2, 6), (3, 9)$, as separate points.

3. For $h = 2t + 4$, where t is weeks and h is cm, find the height at $t = 3$. [2 marks]

$2 \times 3 + 4 = 10$.

Answer: 10 cm.

4. For the same plant model, explain $(2, 8)$. [2 marks]

Read time first and height second.

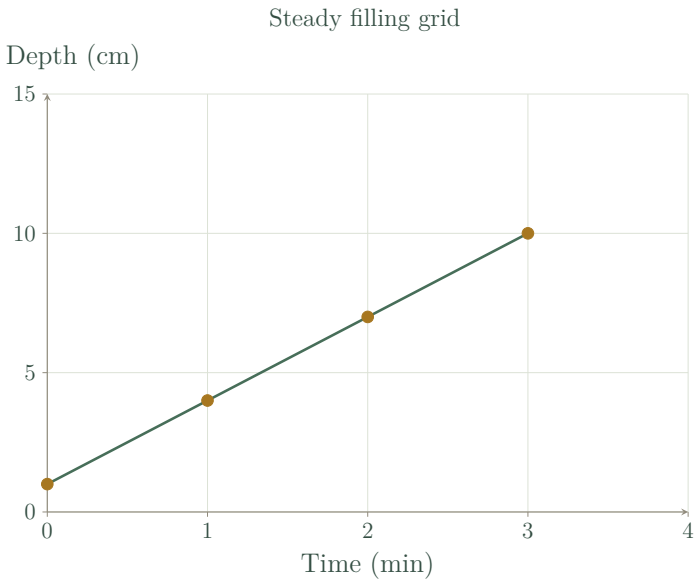
Answer: At 2 weeks the model predicts 8 cm.

5. A horizontal axis uses the same physical gap for 0 to 1 and for 1 to 5. Explain the error. [3 marks]

The first gap represents 1 unit; the next represents 4 units.

Answer: An ordinary uniform scale needs equal numerical changes in equal physical gaps.

6. A steady filling model gives depths 1,4,7,10 cm at times 0,1,2,3 min. Plot and join the points. [3 marks]



The depth increases by 3 cm per minute.

Steady filling justifies intermediate depths.

Answer: $(0, 1), (1, 4), (2, 7), (3, 10)$, joined by a straight segment.