**Summary:**

3000 variations. Linear functions.

**Question: 3000 Variations**

The initial temperature of a kiln (oven for baking pottery) is <EFOFEX>
id:fxe{d79a31ae-f299-420c-93af-76ca198e6e16}
FXGP:DP-SRL5LQ3
FXData:

</EFOFEX>°C. Every hour for 8 hours it increases by <EFOFEX>
id:fxe{67c3397f-31bc-48dd-87f6-dd4fc234741b}
FXGP:DP-SRL5LQ3
FXData:

</EFOFEX>°C.

a) Construct a table of values that shows the temperature over the 8 hours.

b) Plot an appropriate graph for your table of values.

<EFOFEX>
id:fxd{d8b608ca-4824-4f61-9ae0-4caaef9c3899}
FXGP:DP-SRL5LQ3
FXData:

</EFOFEX>

c) Write a rule that connects time in hours (h) to the temperature of the kiln (T).

d) What is the temperature when time is <EFOFEX>
id:fxe{a8a682e5-e1cf-4415-9244-5224b1ba4f88}
FXGP:DP-SRL5LQ3
FXData:

</EFOFEX> hours and <EFOFEX>
id:fxe{b7cc93ed-0916-4cd5-a613-9e1156756b6b}
FXGP:DP-SRL5LQ3
FXData:

</EFOFEX> mins? Use your rule.

e) Use your equation in (c) to calculate the time, to the nearest minute, taken for the temperature to reach <EFOFEX>
id:fxe{5c4c3eaf-ada4-40c0-9117-e43405d9f89f}
FXGP:DP-SRL5LQ3
FXData:

</EFOFEX>°C.

**Solution:**

a)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **h** | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **T** | <EFOFEX> id:fxe{d9388b8e-3c8e-4b15-bfcf-6bc1e9fe41ce} FXGP:DP-SRL5LQ3 FXData:  </EFOFEX> | <EFOFEX> id:fxe{2675e95b-ef81-4e78-b96e-e66154e18302} FXGP:DP-SRL5LQ3 FXData:  </EFOFEX> | <EFOFEX> id:fxe{33fadf74-9ad6-48fb-b05b-afa0fb845273} FXGP:DP-SRL5LQ3 FXData:  </EFOFEX> | <EFOFEX> id:fxe{d9c03c99-4d2e-400b-9be6-35c0227f3243} FXGP:DP-SRL5LQ3 FXData:  </EFOFEX> | <EFOFEX> id:fxe{171d53df-7a0b-41a1-a337-ee1cd82b834d} FXGP:DP-SRL5LQ3 FXData:  </EFOFEX> | <EFOFEX> id:fxe{a80e99ff-37d3-4263-a77c-a68de981c285} FXGP:DP-SRL5LQ3 FXData:  </EFOFEX> | <EFOFEX> id:fxe{df074530-f0c8-4efb-9f5b-02b5feb2d6f2} FXGP:DP-SRL5LQ3 FXData:  </EFOFEX> | <EFOFEX> id:fxe{fa5c70b2-0900-4562-bd8c-55bd164b5445} FXGP:DP-SRL5LQ3 FXData:  </EFOFEX> | <EFOFEX> id:fxe{fb8890ca-145a-467a-86e8-a7ea2eef7e5d} FXGP:DP-SRL5LQ3 FXData:  </EFOFEX> |

b)

<EFOFEX>
id:fxd{cc2d9b8b-b9d4-4157-889e-7f1655f056fb}
FXGP:DP-SRL5LQ3
FXData:

</EFOFEX>

c) <EFOFEX>
id:fxe{dc83519e-a213-4f6e-9f2e-28e211acb445}
FXGP:DP-SRL5LQ3
FXData:

</EFOFEX>

d) <EFOFEX>
id:fxe{696ca2e4-dc23-4cf0-801e-caea6e93812b}
FXGP:DP-SRL5LQ3
FXData:

</EFOFEX>

e) <EFOFEX>
id:fxe{7d10153a-43e5-4c04-b3cc-9040338ccce7}
FXGP:DP-SRL5LQ3
FXData:

</EFOFEX>