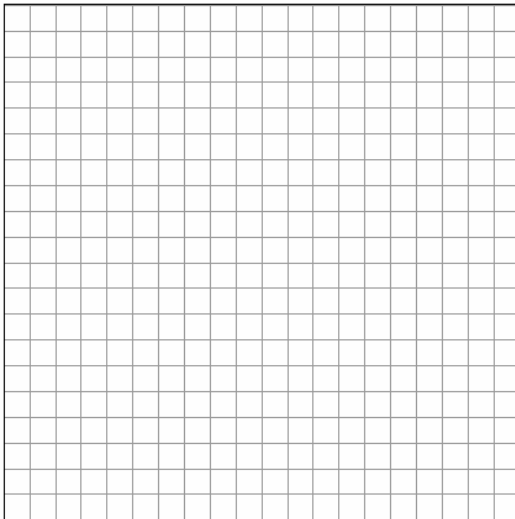


NAME: _____

1. 010532b, P.I. A2.A.22

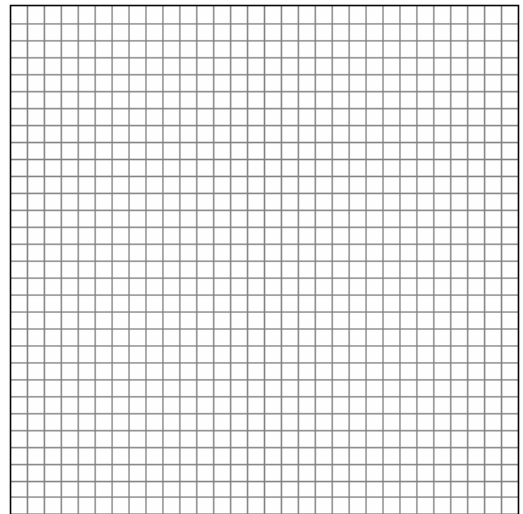
The equation $V = 20\sqrt{C + 273}$ relates speed of sound, V , in meters per second, to air temperature, C , in degrees Celsius. What is the temperature, in degrees Celsius, when the speed of sound is 320 meters per second?

[The use of the accompanying grid is optional.]



2. 010532b, P.I. A2.A.22

The number of people, y , involved in recycling in a community is modeled by the function $y = 90\sqrt{3x} + 400$, where x is the number of months the recycling plant has been open. Construct a table of values, sketch the function on the grid, and find the number of people involved in recycling exactly 3 months after the plant opened. After how many months will 940 people be involved in recycling?



[2] -17, and appropriate work is shown.

[1] Appropriate work is shown, but one conceptual error or one computational or graphing error is made.

or [1] -17, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[1] incorrect procedure.

[4] A correct table of values is provided, a correct graph is drawn, and 670; 12, and appropriate work is shown, such as extending the graph or solving algebraically.

[3] Appropriate work is shown, but one computational or graphing error is made.

or [3] A correct table of values is provided, a correct graph is drawn, and 670, but no further correct work is shown.

[2] Appropriate work is shown, but two or more computational or graphing errors are made.

or [2] Appropriate work is shown, but one conceptual error is made.

or [2] 670 and 12, but an algebraic solution is provided.

or [2] 670 and 12, but either the graph is not drawn or the table of values is not provided.

[1] Appropriate work is shown, but one conceptual error and one computational or graphing error are made.

or [1] A correct graph is drawn, but no further correct work is shown.

or [1] A correct table of values is provided, but no further correct work is shown.

or [1] 670 and 12, but no work is shown and no graph is drawn.

[0] 670 or 12, but no work is shown and no graph is drawn.

or [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an

[2] obviously incorrect procedure.
