## 

Name: $\qquad$ Date:
Score:


Use the distance chart and the map to help you answer the following questions.

1. Santa Claus is in Cairo and still has eleven cities to go before he can give his reindeer a break. The reindeer are already tired, so Santa wants to find the shortest route to follow starting at Cairo and stopping at all the other cities. It doesn't matter which city is the final stop. Use the chart and map to help Santa find the shortest route. What is the distance you found?
2. What is the shortest route and the distance if Santa starts in Warsaw?
3. Can you find another route that is even shorter if Santa starts in a different city? What route and distance did you find?

## 

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| Cities | Cairo | Kolkata | Chicago | Lisbon | London | Manila | Moscow | Paris | Rome | Sydney | Tokyo | Warsaw |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Cairo | miles | 3,539 | 6,129 | 2,363 | 2,181 | 5,704 | 1,803 | 1,995 | 1,320 | 8,952 | 5,935 | 1,630 |
| 2. Kolkata | 3,539 | miles | 7,980 | 5,638 | 4,947 | 2,203 | 3,321 | 4,883 | 4,482 | 5,685 | 3,194 | 4,048 |
| 3. Chicago | 6,129 | 7,980 | miles | 3,990 | 3,950 | 8,143 | 4,974 | 4,134 | 4,808 | 9,272 | 6,299 | 4,667 |
| 4. Lisbon | 2,363 | 5,638 | 3,990 | miles | 985 | 7,546 | 2,427 | 904 | 1,161 | 11,302 | 6,915 | 1,715 |
| 5. London | 2,181 | 4,947 | 3,950 | 985 | miles | 6,672 | 1,555 | 213 | 887 | 10,564 | 5,940 | 899 |
| 6. Manila | 5,704 | 2,203 | 8,143 | 7,546 | 6,672 | miles | 5,131 | 6,677 | 6,457 | 3,944 | 1,866 | 5,837 |
| 7. Moscow | 1,803 | 3,321 | 4,974 | 2,427 | 1,555 | 5,131 | miles | 1,544 | 1,474 | 9,012 | 4,647 | 715 |
| 8. Paris | 1,995 | 4,883 | 4,134 | 904 | 213 | 6,677 | 1,544 | miles | 697 | 10,544 | 6,034 | 849 |
| 9. Rome | 1,320 | 4,482 | 4,808 | 1,161 | 887 | 6,457 | 1,474 | 697 | miles | 10,136 | 6,135 | 817 |
| 10. Sydney | 8,952 | 5,685 | 9,272 | 11,302 | 10,564 | 3,944 | 9,012 | 10,544 | 10,136 | miles | 4,866 | 9,696 |
| 11. Tokyo | 5,935 | 3,194 | 6,299 | 6,915 | 5,940 | 1,866 | 4,647 | 6,034 | 6,135 | 4,866 | miles | 5,249 |
| 12. Warsaw | 1,630 | 4,048 | 4,667 | 1,715 | 899 | 5,837 | 715 | 849 | 817 | 9,696 | 5,249 | miles |

To find a distance from one city to another, find where the row of the first city intersects the column of the second city or vice-versa. Each pair of cities can be found twice on the chart.

For example, to find the distance from Rome to Chicago, find Rome's row and follow it to the right until it intersects Chicago's column. You could also start with Chicago's row and follow it until it intersects with Rome's column. The distance from Rome to Chicago is highlighted in light red in the chart in both places it can be found.


Source: Google My Maps, Map data ©2021 Google

View this map on Google My Maps
If you have a Google account, you can copy the map into your account then draw in a route using the draw a line tool.

