

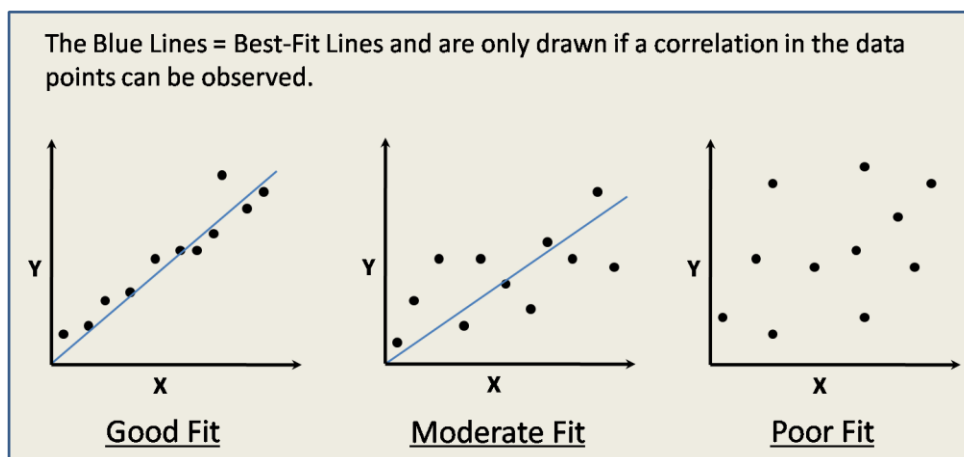
Activity 2 (Pages 7.12-7.16):

Make sure to read and follow the directions at the bottom of Page 7.12 before plotting the graphs on Pages 7.13, 7.14, and 7.15!

As mentioned in the directions, you will need to look up the data in Table 1 on Page 7.10. Each graph is already labeled and the scales are provided for the x and y axis.

When you have completed the three graphs, answer Questions 1-3, and Skip Question 4 on Page 7.16!

See the diagram below in order to understand what is meant by drawing a "**best-fit**" line. In addition, the diagram shows examples of a **good fit**, **moderate fit**, and **poor fit** when determining if the data points form a consistent pattern in each of the graphs.



We will skip the Post-Lab Assessment on Page 7.17!

Week7 Oregon Climate Lab
Part B Activity 2

NAME_____

Activity 2: Focus on South-Central Oregon.

Make some scatter plots to examine the annual climate data in Table 1 for the South Central Oregon section (stations include Madras, Redmond, Prineville, Bend, Klamath Falls, Burns, and Lakeview). Use the data for the listed weather stations to make scatter plots on the graphs provided for:

- Mean Annual Precipitation vs. Elevation (Figure 5a)
- Mean Annual Temperature vs. Elevation (Figure 5b)
- Mean Annual Temperature vs. Mean Annual Precipitation (Figure 5c)

The graphs have already been scaled for you. Plot a point for each south-central weather station on each graph. Label the point with the name of the station. Or you can enter the data in a spreadsheet program, and use its chart function to make the graphs.

Mean Annual Precipitation vs. Elevation South-Central Oregon

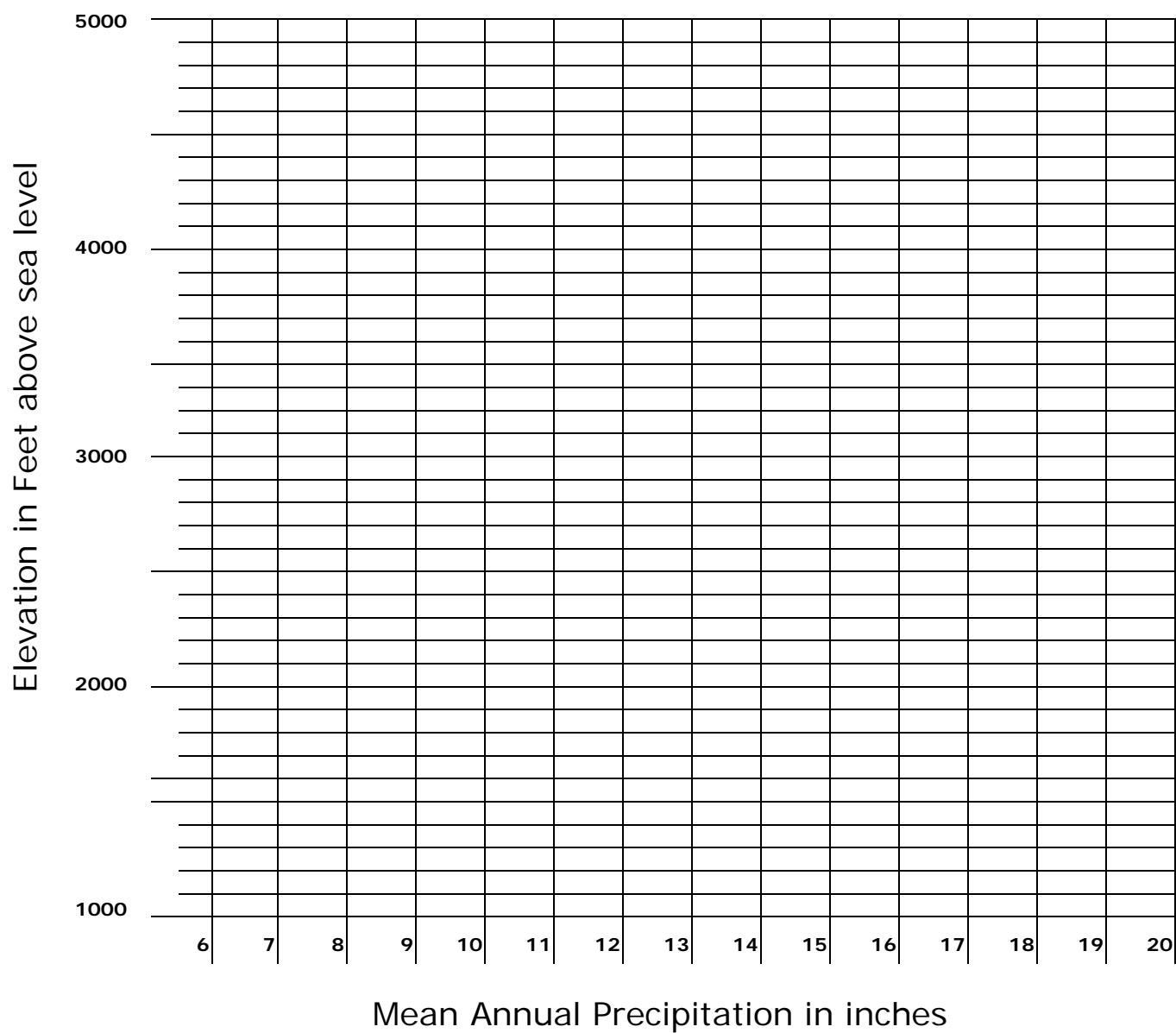


Figure 5a: Plot of Precipitation vs. Elevation—South-Central Oregon

Mean Annual Temperature vs. Elevation South Central Oregon

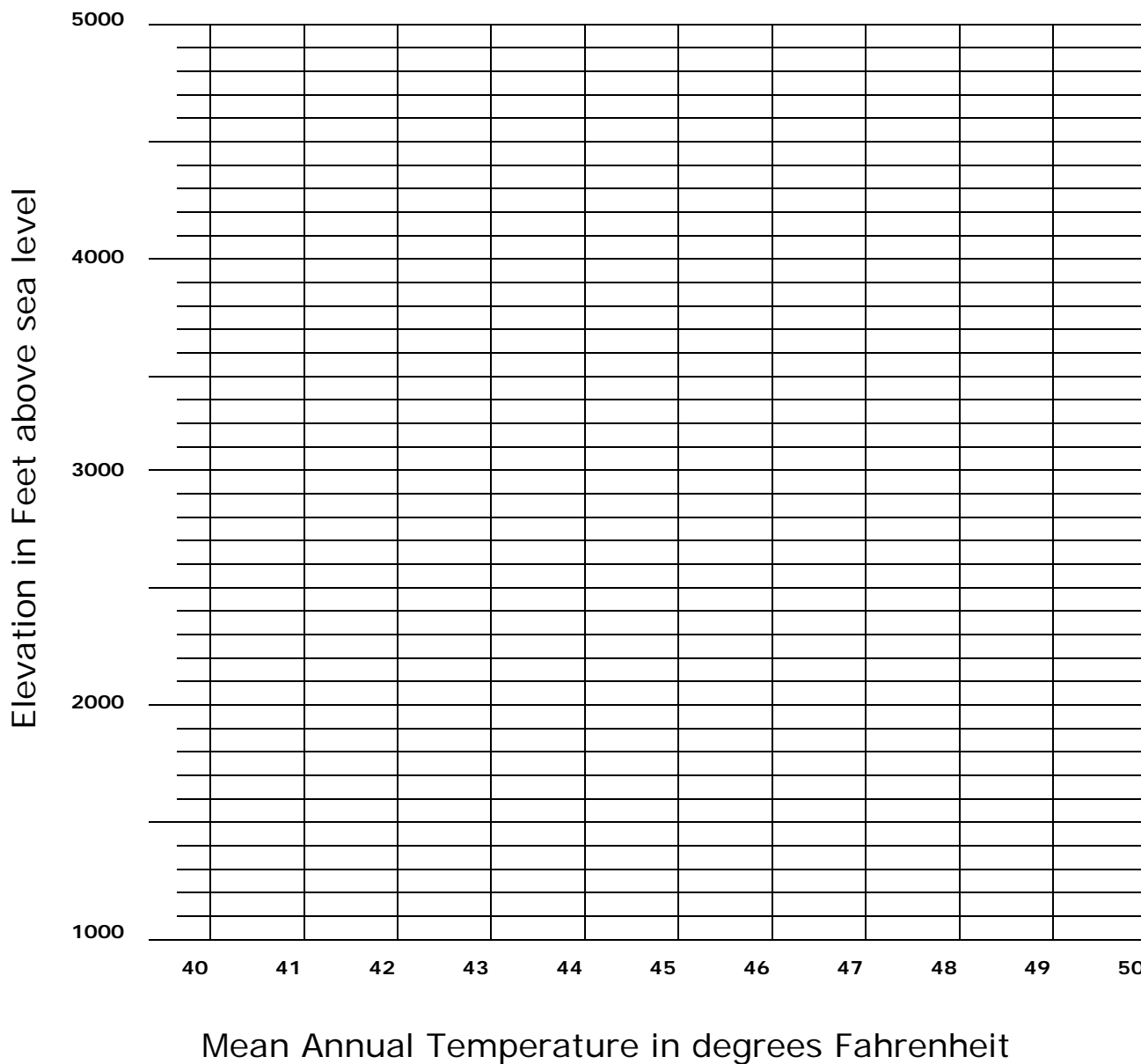


Figure 5b: Plot of Mean annual Temperature vs. Elevation
—South-Central Oregon

Mean Annual Temperature vs. Precipitation South-Central Oregon

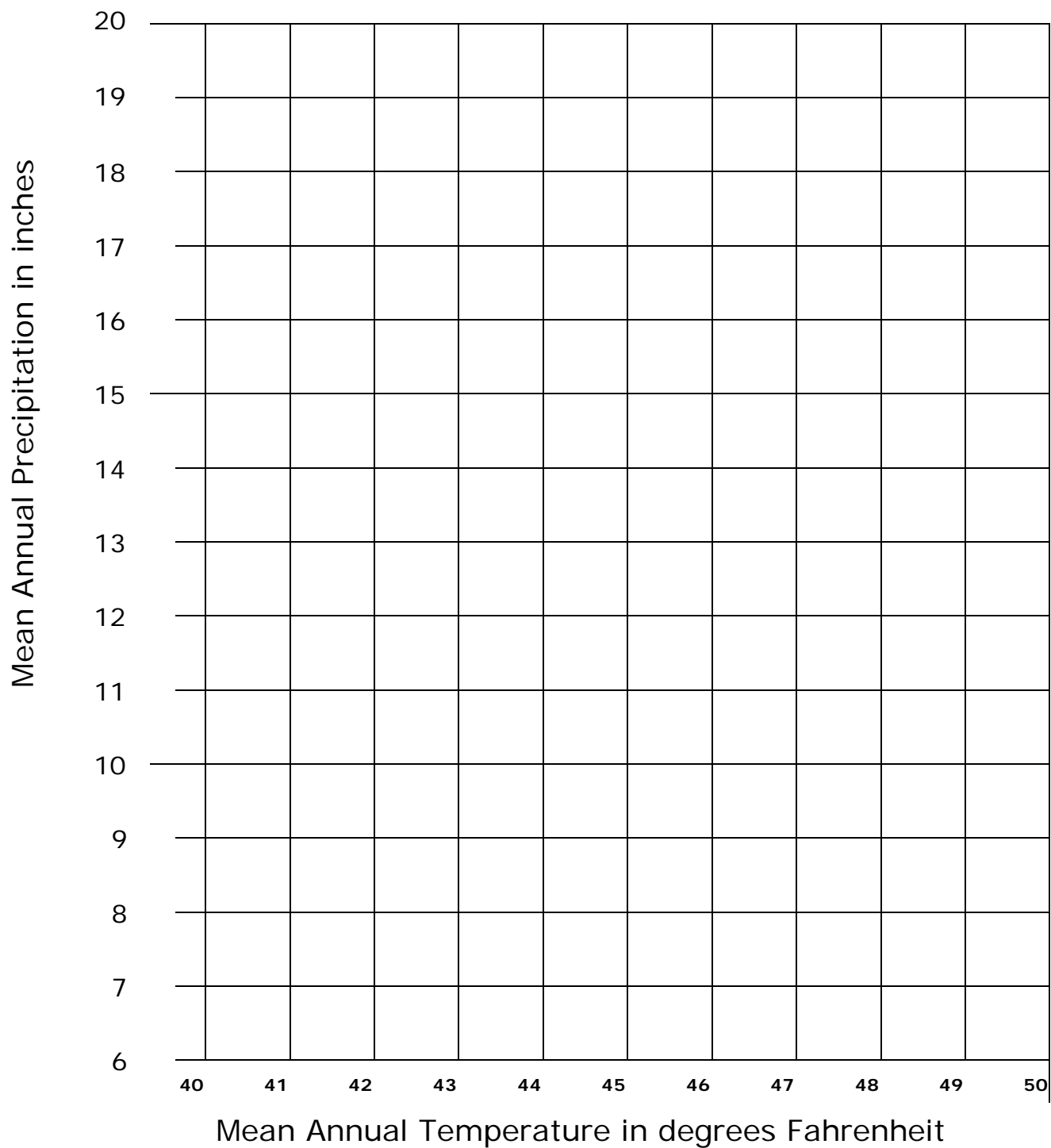


Figure 5c: Plot of Mean Annual Temperature vs. Precipitation
—South-Central Oregon

Questions

1. Does precipitation relate to elevation in south-central Oregon? (That is, how consistent is the relationship in your data set: good fit, moderate fit, or poor fit?) Draw a 'best fit' line **if** there seems to be a correlation. **Do not draw a "best-fit" line if the data points are scattered in a "shot-gun" pattern.** (The shotgun pattern indicates little relationship between the two parameters).
2. Does mean annual temperature relate to elevation in south-central Oregon? That is, how consistent is the relationship in your data set: good fit, moderate fit, or poor fit?) Is the data relationship as convincing as the Precipitation-Elevation data?
3. Does mean annual precipitation relate to temperature in south-central Oregon? (How consistent is the relationship given your data set: good fit, moderate fit, or poor fit?)
4. Given last week's concepts of evaporation, forceful lifting, atmospheric elevation, dew point, relative humidity, and precipitation, write a summary paragraph explaining your graph observations in terms of atmospheric physics.