

My name is James Mumaugh. I teach Math 051 (Trigonometry) at Solano Community College in Fairfield, CA. I am using Trigonometry by Coburn & Herdlick 2nd edition. ISBN 978-0-07-728272-8.

I have found what I believe to be two typo errors.

The first to report is on page 193, problem 23. In the left column the number decrease from -6 to zero however where there should be a -1 there is simply a 1.

The second error is more involved but is also on page 193.

The problem reads:

Monthly precipitation in Cheyenne, Wyoming, can be modeled by a sine function, by using the average precipitation for July (2.26 in.) as a maximum (actually slightly higher in May), and the average precipitation for February (0.44 in.) as a minimum. Assume $t=0$ corresponds to March. (a) Use the information to construct a sinusoidal model. (b) Use the model to estimate the inches of precipitation Cheyenne receives in August ($t=5$) and December ($t=9$).

There is no justification for the statement, "Assume $t=0$ corresponds to March." I believe this was included to insinuate a "sine looking" graph -- i.e. a curve that begins at its axis rises to its maximum, falls to its axis, falls further to its minimum and rises to its axis.

I have no idea about the statement: "(actually slightly higher in May)".

The instructor's solution book offers the function: $P(t) = 0.91 \sin\left(\frac{\pi}{6}t\right) + 1.35$ as a partial solution to the problem. The answers offered for part (b) is 1.81 for August and .44 for December.

Both of these answers are obtained from $P(5)$ and $P(9)$ without any trouble however, the minimum, according to the story, is supposed to be in February rather than in December.

Based on what has been covered in the textbook, I believe that the intended problem should have read: Monthly precipitation in Cheyenne, Wyoming, can be modeled by a sine function, by using the average precipitation for June (2.26 in.) as a maximum and the average precipitation for December (0.44 in.) as a minimum. Assume $t=0$ corresponds to March. (a) Use the information to construct a sinusoidal model. (b) Use the model to estimate the inches of precipitation Cheyenne receives in August ($t=5$) and February ($t=11$).

The solutions become: $P(t) = 0.91 \sin\left(\frac{\pi}{6}t\right) + 1.35$. The answer for part (b) is 1.81 for August and .9 for December.

