On Page 278 section 9.2.3 in the book, it says the formula the nominal effort for an organic mode software (which is what the Tiger Builders software project will be) is:

Nominal effort = 3.2 \* (KDSI)^(1.05) person-months

Where the KDSI is 45.

So, 3.2 \* 45^(1.05) = 174.189

For the Tiger Builders software project, the estimated person months with a nominal estimate is 174 person-months.

With the average person cost of $70,000 we get 70,000/12 which is about $5,833 per month.

So far we have the nominal estimate; we still need to get the COCOMO estimate.

From the information provided on the paper, the cost drivers for this project are all nominal except: database is high, computer turnaround time is low, and required development schedule is high.

We take all of the cost drivers that COCOMO calls for and multiply them together:

Required software reliability \* Database Size \* Product complexity \* Execution time constraint \* Main storage constraint \* Virtual machine volatility \* Computer turnaround time \* Analyst capabilities \* Applications experience \* Programmer capability \* Virtual machine experience \* Programming language experience \* Use of modern programming practices \* Use of software tools \* Required development schedule

Where all of the above “variables” are 1 EXCEPT:

Database size is 1.08, Computer turnaround time is 0.87, and Required development schedule is 1.04

So, 1 \* 1.08 \* 1 \* 1 \* 1 \* 1 \* 0.87 \* 1 \* 1 \* 1 \* 1 \* 1 \* 1 \*1 \* 1.04 = 0.977184 which is what the cost drivers helped us get.

Now we solve the COCOMO estimate by multiplying the nominal estimate by the cost drivers:

174.189 \* 0.977184 = 170.214704 COCOMO estimate

With these numbers we can take the cost per month and multiply it the amount of months it will take to complete the project that came from the COCOMO estimate and this will give the total cost to do the project:

5,833 \* 170.214704 = $992,862.368

In conclusion, the person-months that the Tiger Builders software project will take based off of the intermediate COCOMO estimate is 170.214704 person-months, and the total cost for this project will be $992,862.368