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New Perspectives excel 2010

Tutorial 3: Case Problem 1b

Advanced Calculus

Skills

* Save a workbook with a new name
* Enter formulas
* Use absolute references
* Fill adjacent cells with formulas
* Create formulas using the COUNT function
* Create formulas using the MEDIAN function
* Create formulas using the MAX function
* Create formulas using the MIN function
* Apply conditional formatting to a range of cells
* Control page breaks
* Add print titles
* Modify the worksheet orientation

Project overview

Silvio D’Alessandro is a high school mathematics teacher in Bergen Regional High School in Columbus, Ohio. He has started using Excel to calculate the final grade for students in his Advanced Calculus class. The final grade is a weighted average of the grades received for the first three marking periods and the final exam. One way to calculate a weighted average is by multiplying each student’s marking period grade by the weight given to the marking period and then final exam, and then totaling the results. For example, consider the following marking period grades and final exam grade:

* Marking Period 1 = 84
* Marking Period 2 = 80
* Marking Period 3 = 83
* Final Exam = 72

If the marking periods exams are each given a weight of 15, 20 and 25 percent, in that order, and the final exam is given a weight of 40 percent, the weighted average of the four scores is:

84\*0.15 + 80\*0.2 + 83\*0.25 + 72\*0.4 = 81.3

Mr. D’Alessandro already entered the marking period grades for his students and formatted much of the workbook. He wants you to enter the formulas and highlight the top 15 overall grades in the class.

STUDENT start FILE

***NP\_Excel2010\_T3\_CP1b\_FirstLastName\_1.xlsx*** (*Note:* Download your personalized start file from www.cengage.com/sam2010)

Instructions

1. Open the file **NP\_Excel2010\_T3\_CP1b\_*FirstLastName\_*1.xlsx** and save the file as **NP\_Excel2010\_T3\_CP1b\_*FirstLastName*\_2.xlsx** before you move to the next step. Verify that your name appears in cell B4 of the Documentation sheet. (Note: Do not edit the Documentation sheet. If your name does not appear in cell B4, please download a new copy of the start file from the SAM Web site.)
2. In the Final Grades worksheet, in cell F16, enter a formula to calculate the weighted average of the first student’s three marking period grades and the final exam. The formula in cell F16 should use absolute references to the weights found in the range B6:B9, matching each weight with the corresponding grade. Use Auto Fill to copy the formula in cell F16 into the range F17:F45.
3. In cell F12, use the **COUNT** function to calculate the total number of final grades in the range F16:F45.
4. In cell C6, use the **MEDIAN** function to calculate the median grade for the first marking period.
5. In cell D6, use the **MAX** function to calculate the maximum grade for the first marking period.
6. In cell E6, use the **MIN** function to calculate the minimum grade for the first marking period.
7. In cell F6, calculate the range of scores for the first marking period, which is equal to the difference between the maximum and minimum score.
8. Calculate the median, maximum, minimum, and range scores for MP 2, MP 3, the Final Exam, and the Final Grades. (*Hint:* Repeat steps 4 through 7 for each of rows 7, 8, 9, and 10.)
9. Use conditional formatting to highlight the top 15 scores in the range F16:F45 with **Light Red Fill with Dark Red Text**.
10. Insert a page break at cell A13, repeat the first three rows of the worksheet in any printout, print gridlines, and set the worksheet to Landscape orientation.

Your completed worksheet should look like the Final Figure below. Save your changes, close the workbook and exit Excel. Follow the directions on the SAM Web site to submit your completed project.

FINAL FIGURE

