

Key

6. Other Worksheets

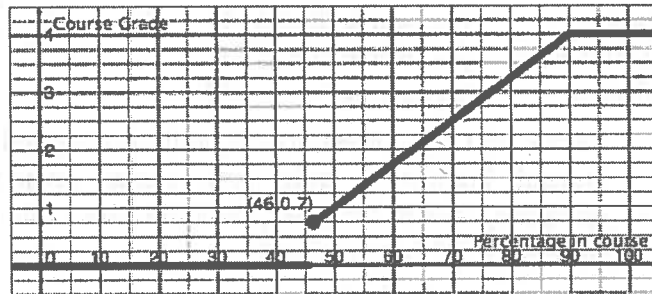
6.1 Computing Grades

- Clark Kent goes to college and on the first day of precalculus class he is handed the following information on the syllabus:

Grades:

The following weights will be used to calculate your percentage in the course. The function graphed takes your percentage in the course and returns your grade on a 4. scale.

Mini-Quizzes (top score)	5%
WeBWork assignments	10%
Handwritten assignments	15%
Quizzes	15%
2 Midterms	30%
Final	25%



In week 7 Clark begins to get concerned about his grades (being a super hero is still new to him so he has missed a few assignments and a test). He logs onto Catalyst and finds the following information:

Mini-Quiz:	(ea. worth 10pts)	9.5								
WebWork:	(ea. worth 10pts)	10	10	10	10	10	10	10	10	10
Written HW:	(ea. worth 10pts)	10	8	0	7	9	0	6		
Quizzes:	(percentage)	100	0	100	80					
2 Exams	(percentage)	92	0							

note: there are other valid ways of computing averages shown on the back.

- Compute Clark's current averages for each of the categories below:
 Mini-Quiz $9.5/10 = .95$
 WeBWork $(\frac{10}{10} + \frac{10}{10} + \frac{10}{10} + \frac{10}{10} + \frac{10}{10} + \frac{10}{10} + \frac{10}{10} + \frac{10}{10} + \frac{10}{10} + \frac{10}{10}) / 10 = 1.00$
 WrittenHW $(\frac{10}{10} + \frac{8}{10} + \frac{0}{10} + \frac{7}{10} + \frac{9}{10} + \frac{0}{10} + \frac{6}{10}) / 7 = .57$
 Quizzes $(100 + 0 + 100 + 80) / 4 = .70$
 Exams $.46$

- Assuming his performance in each category will not change in the remaining weeks, what grade must Clark get on his final to get a 2.5 in the class?

points earned from miniquiz + points earned from WeBWork + points earned from HW + points earned from Quizzes + points earned from Midterms + points earned from final = Course %

$$.95 \cdot 5 + 1.00 \cdot 10 + .57 \cdot 15 + .70 \cdot 15 + .46 \cdot 30 + ? \cdot 25 = \text{Course \%}$$

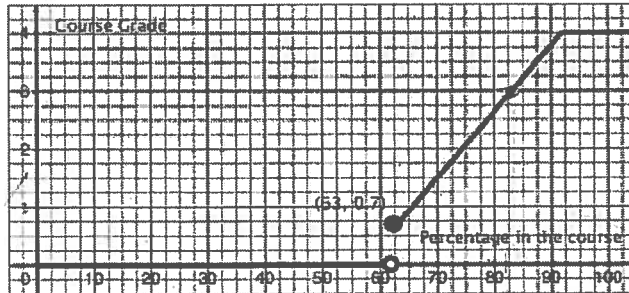
$$47.6 + ? \cdot 25 = \text{Course \%}$$

To earn a 2.5 in the class, the graph shows Clark needs to get a 70% $\Rightarrow 47.6 + ? \cdot 25 = 70 \Rightarrow ? = 89.6\%$ on 89.6%

2. Lois Lane goes to college and on the first day of origami math class is handed the following information on the syllabus:

Grades: The following weights will be used to calculate your grade.

Journals	15%
Homework	15%
Quizzes	15%
Origami Project	10%
Papers	10%
Midterm	15%
Final	20%



The above grade assignment is based off the University of Washington, Tacoma's grading scale posted at <http://www.tacoma.washington.edu/enrollmentservices/grading.cfm>

In week 7 Lois begins to get concerned about her grades. She logs onto Catalyst and finds the following information:

97%	Journals:	(ea. worth 10pts)	10	10	10	7	10	10	10	10	10	10
82.5%	Homework:	(ea. worth 15pts)	15	11	10	12	10	15	15	11		
80%	Quizzes:	(ea. worth 20pts)	18	13	17	18						
93%	Origami Proj.	(ea. worth 40pts)	37									
82%	Midterm:	(percentage)	82									

Recall that the lowest scoring quiz is dropped when computing grades. Assuming her journal, homework, quiz, and origami project averages do not change much in the remaining weeks, what scores could Lois Lane get on her papers and final to make sure she gets a 2.0 in the class?

we need to compute the averages for each category

One way to do it is compute the % for each assignment then average those
 ex Journal Ave = $(\frac{14}{10} + \frac{14}{10} + \frac{14}{10} + \frac{7}{10} + \frac{14}{10} + \frac{14}{10} + \frac{14}{10} + \frac{14}{10} + \frac{14}{10} + \frac{14}{10}) / 10 = .97$

Another way to do it (if all the assignments are worth the same amount) is total the points + ÷ by the total possible.

ex HW Ave = $(15 + 11 + 10 + 12 + 10 + 15 + 15 + 11) / (8 \cdot 15) = .825$

Don't forget to drop the lowest scoring quiz, when computing the quiz average

ex Quiz Ave = $(\frac{18}{20} + \frac{13}{20} + \frac{17}{20}) / 3 = .80$

To compute the class grade:

$$\begin{aligned} \text{ave \%} &= \frac{\text{Points earned from Journals} + \text{Points earned from HW} + \text{Points earned from Quizzes} + \text{Points earned from Origami} + \text{Points earned from Paper} + \text{Points earned from Midterm} + \text{Points earned from Final}}{\text{Total Points Possible}} \\ &= .97 \cdot 15 + .825 \cdot 15 + .80 \cdot 15 + .93 \cdot 10 + ? \cdot 10 + .82 \cdot 15 + \text{final} \cdot 20 \end{aligned}$$

$$\text{ave \%} = 14.55 + 12.375 + 12 + 9.3 + ? \cdot 10 + 12.3 + \text{final} \cdot 20$$

$$\text{Course \%} = 60.525 + ? \cdot 10 + \text{final} \cdot 20 = (\text{If Lois wants a 2.0 in the class the above graph shows})$$

$$75 = 60.525 + ? \cdot 10 + \text{final} \cdot 20 = (\text{Lois needs to get a 75\%})$$

14 475 - 12 110 + final 20 = Total points earned in this class = not shall we do