iLrn/ThomsonNOW info and hints:

For typing answers into ThomsonNOW in the correct form, the best guides are **the answers in the back of the book**, the answers on the even answer overheads in the recitations, and the answers your lecturers recommend.

HW 31A #3,4 & HW 31B #2 - ThomsonNOW wants only the x- or y-coordinate of the x- or y-intercept rather than the more correct coordinate pair of the point where the graph of the function intersects either the x- or y-axis. On quizzes, always give answers for the x- and y-intercepts as coordinate pairs as we have done consistently in lectures.

HW 31A #14 - Use natural logs (ln) to solve the problem.

HW 31B #9 - The problem is working fine in iLrn. Keep at it. Read and interpret the problem carefully.

HW 31B #11 - The wording in messed up. What you are trying to find is the following:
Express in terms of the radiation length, the thickness at which the electron loses ??% of its initial energy.
The normal subscript template works fine for entering x sub zero. If instead you use the asked for x_{0}, ThomsonNOW seems to give the subscript as soon as you press shift-underline and then you can just press zero.
MORE: Since the problem asks for a two-decimal place factor to be used, your answer should somehow include a two-decimal place approximation. The word factor in this problem means to multiply.

****General:** 'separate values' means 'exact values'.
****General:** Rationalizing the denominator of something like '1/sqr(6)' to 'sqr(6)/6' is usually not required by iLrn.
****General:** You should always give an exact answer unless asked to give an approximation, (a fraction, log(7), pi/3, etc.).

HW 32A #14 & 32B #12 - You may or may not need to mess with the following, but even so this could also be useful information for transforming answers into a different form, which might be especially useful on an exam.
I did not need this, but students in the past have occasionally found the following useful. If nothing else it does talk about how to manipulate your answers into a different form when needed.
Using the idea of raising a fraction to the -1 power means to take the reciprocal:
log(1/8) = log((8)^-1) = -log(8).
Thereby an answer such as log(1/3)/(log(4/7)) could be written several ways.
log(1/3)/(log(4/7)) = -(log(3)/(log(4/7))) = -(log(1/3))/(log(7/4))) = log(3)/(log(7/4))
For some reason ThomsonNOW has occasionally been looking for one of the answers with the negative sign in front of the fraction.
A big clue that this is a problem for you is if you are getting part 2 correct on the problem, but it is not accepting your answer to part 1.

HW 32B #10 - As you would suspect, the answer should indeed be a number of years and then rounded appropriately.

HW 32B # 14 - something like 'ln((1+x)^c))' should be typed as 'c*ln(1+x)'

HW33A #2 - iLrn strangely does not want something like sqr(8) simplified to 2*sqr(2).

HW33A #3 & HW33B #1 I noticed that it doesn't matter what order you put your answers in. To me, I would think this allows room for error in that we may not know the difference between csc, sec, or well you get the idea. So, be careful of that, some iLrn problems will require a specific order, as they should, while other problems will not, make sure you know which ratio corresponds to which trig function.

HW33A #7 - iLrn wants an exact decimal answer rather than an exact fraction.

HW33A #11 - The ft/sec number given in the problem has been rounded off in some cases. Therefore using that number for your calculations will prove slightly inaccurate. Only by 0.1 in my case, but that was enough to be

incorrect. If you use the mi/hr and convert that to ft/sec and then using that more exact value for the ft/sec, that will work.

General: 'separate values' means 'exact values'.
General: Rationalizing the denominator of something like '1/sqr(6)' to 'sqr(6)/6' is usually not required by iLrn.
General: You should always give an exact answer unless asked to give an approximation, (a fraction, log(7), pi/3, etc.).

HW 34A #1: not a biggie, but the triangle displayed does not have a 90 degree symbol in the picture, but the answers correspond to a right triangle.

HW 34A #3: You might want to make a note that when using your calculator, you need to use radian mode when entering your calculations.

HW34A #'s 4, 5, 10 & HW34B #6 I noticed that it doesn't matter what order you put your answers in. To me, I would think this allows room for error in that we may not know the difference between csc, sec, or well you get the idea. So, be careful of that, some iLrn problems will require a specific order, as they should, while other problems will not, make sure you know which ratio corresponds to which trig function.

HW 34B #9 & #8: The way iLrn wants you to format your answer is almost ridiculous. ..."almost" A couple of key hints: When entering in theta, it must be put in parenthesis (theta). With no spaces between it and whatever follows, such as sin(theta) or cos(theta).
*For **for #9**, the numerator needs to be enclosed in parentheses.
HW 34B #9 MORE - For something like the square root of 1-(csc(theta))^2 then divided by cos(theta).
Type in your answer like sqr(1-(csc(theta))^2)/cos(theta). If you have the right answer, then this form will work.
NOTE: also 'sec(theta)^2' is interpreted by iLrn as (sec(theta))^2, which is what you want if you want to square a trigonometric function of theta.
EVEN MORE HW 34B #9 - From one of you guys; … #9 is where I got stuck, because even if I put theta in parenthesis immediately following the square, iLrn still perceived it as if I was multiplying it. So,... if you have something like sqr(1-cos2(theta)) it will have to be inputted as sqr(1-(cos(theta)2)).

HW 35A & 35B: No new hints are needed.

****General:** You should always give an exact answer unless asked to give an approximation, (a fraction, log(7), pi/3, etc.).
****General:** 'separate values' means 'exact values'.
****General:** Rationalizing the denominator of something like '1/sqr(6)' to 'sqr(6)/6' is usually not required by iLrn.

HW 36A & 36B: No new hints are needed.

HW 37 & 38 - on any problem requiring you answer questions about the graph of the function
Make sure you have an accurate sketch of the graph in each problem, especially on that interval from [0, 2*pi) that they specify for some of the parts.
Remember, zeros are numbers that cause the y value to be zero and y-intercepts are points not numbers.
If there is no phase shift, use zero '0' instead of 'none' for the phase shift.

HW 38B General - A very few problems may need the use of the degree symbol, which is on the equation palette. Remember an angle answer of "5" implicitly means an angle of "5 radians", unless you explicitly use a

degree symbol after the 5. Most problems needing an answer in degrees simply ask for a number and assume the answer you are giving is in degrees and therefore do not require the explicit use of the degree symbol.

HW 38B #7 - You might try working #47 from the book, check the answer in the back for #47, and then try again.
Use uppercase I for the intensity variable. Also, using parentheses around the expression you are taking the sine of might help.

HW 39B #'s 5, 7, & 8 - I can't really think of an appropriate hint, but you might check out the corresponding pictures in Section 6.7 of the book. It has a little better pictures of the objects.

****General:** You should always give an exact answer unless asked to give an approximation, (a fraction, log(7), pi/3, etc.).
****General:** 'separate values' means 'exact values'.
****General:** Rationalizing the denominator of something like '1/sqr(6)' to 'sqr(6)/6' is usually not required by iLrn.

HW 40 General: Some of the problems want a less simplified version of the answers than the corresponding answers in the back of the book, so since that is less work you might try that first before going to the extraordinary lengths of simplification to get the answer in the form in the back of the book.

HW 40B #5 - There is nothing wrong with the problem. However, it is indeed one of the more challenging problem to solve. Keep at it.

HW 41A & 41B: No new hints are needed.

HW 42A #6 - You should solve the system of equations using the method of substitution done in lecture, rather than using matrices as the problem asks. It will work out correctly using either method of course.

HW 43 General - As we said in lecture standard form for these polar equations means typically to solve for r or on very rare occasions r^2. Also, unlike the answers in the back of the book, ThomsonNOW is fine with something like r=5/tan(theta) instead of r=5*cot(theta), which would eliminate the fraction. Further, ThomsonNOW does not typically require the parentheses around theta (see the exception below).

HW 43 #4 - You will need to solve for theta by using an inverse trig function. The equation palette has a sin button that has a bunch of choices. asin is inverse sine, acos is inverse cosine, and atan is inverse tangent. asin means arcsine, which is the same thing as inverse sine. acos means arccosine, which is the same thing as inverse cosine. atan means arctangent, which is the same thing as inverse tangent. Some of the notation we used for the problems in section 6.4 will be useful here. So, asin(2/5) is the same as when we wrote sin^-1(2/5).

HW 43 #5 - You need to use parentheses around theta for this particular problem. For example, most of the problems are fine with something like sintheta, costheta, or tantheta, but this problem wants notation something like sin(theta), cos(theta), or tan(theta).

HW43B #7... 2nd and 4th parts of the problem. How to type answers.
In Lesson 37, section 7.2, p. 455 #'s 1-7 from the assignment sheet there were some similar problems/answers. Refer to those problems and their odd-numbered answers in the back of the book. Also, Section 7.2, p.447 Example's 1 through 3 explicitly show how to solve problems like these and write the answers in the correct form if you need more specific help with this problem.