iLrn/CengageNOW info and hints:

For typing answers into CengageNOW 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.

HINT: When you have the palette with the math symbols to enter answers, the top row is actually a menu of choices. Click on the square root symbol and you will see a template for any root as a choice.

HW 27 General: In CengageNOW, the inverse function problems are generally asking simply for an expression rather than an equation. There is a template button for f inverse of x, f^-1(x) that is available on the CengageNOW problems with the large equation palette, but you will not have to use it on most problems. It should be clear from the context of the problem.

HW 27B #10 - Find the subscript template on the palette

HW 27B #11 - Not 'l' or 'L', instead Illumination is 'I' or 'i'. Uppercase is better of course. If you are sure you are right, be careful and think carefully about the quantities before assuming that.

HW 28A #7 – Some versions of the problem seem logical but are not completely accurate. Specifically, 12:00 AM is really midnight, 12:00 PM is Noon. Basically if you assume 12:00 AM means Noon, then the problem works fine.

General: You should always give an exact answer unless asked to give an approximation, (a fraction, log(7), pi/3, etc.).
General: If a problem tells you to use common logs, that means to use log base 10, (log(x), log(122/13), log(x+10), etc.)

HW 29A #18 - As in the answer to the similar problem that appears in the back of the book, CengageNOW does not want you to multiply out denominator of the fraction.

HW 29B #15 - For some reason, CengageNOW wants you to multiply out denominator of the fraction, unlike the answer in the back of the book for the similar problem.

HW 30A 1,2, etc. General - There are a templates for logarithms of any base on the equation palette (any base, base e, and base 10). You can use log(a,b) where a is the base, but you do not have to. Kind of like frac(a,b) versus using the fraction template.

HW 30A #4 - The problem asks for 3 significant figures…Examples: 43.56743 should be rounded to 43.5, 5543 rounded to 5540, 778.987 rounded to 779, 14269 rounded to 14300, etc.

HW 30A #7, 30B #7,8 - type in answers in a function notation like f(x)=-2F(x+5), f(x)=-2g(x+5), etc.

HW 30B #6 part 6(may apply to a few other problems here and there as well) - regarding the y-intercept, when you plug zero in for x if you get something like log base 5 of 8, type it in as (0, log base 5 (8)), where the base '5' should be a subscript after the word 'log'.

HW 30B #12 - Follow the rounding directions for the answer explicitly and make sure you correctly interpret the problem and what type of answer is expected. However, keep in mind that if it takes 12.2 years to reach the target population, that the target population will not be reached when 12 years have passed, so the real and more correct answer would be 13 years and rounded up. I will not try to trick you on exams with this, but be aware of this subtlety. Again, for CengageNOW on this particular problem, simply round to the nearest integer as it asks you to do. **Always follow the directions as explicitly as possible on problems in general, but if I am unsure on any problem, I try rounding maybe down first and then try the rounding up if that fails.**

HW 30B #13 - The normal subscript template works fine for entering q sub zero. If instead you use the asked for q_{0}, CengageNOW seems to give the subscript as soon as you press shift-underline and then you can just press zero.

HW 30B #14 - the word 'contaminated' should basically be 'returns to a safe level of contamination'. The level of radioactivity should be decreasing as time passes.

HW 31A #3,4 & HW 31B #2 - CengageNOW 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}, CengageNOW 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 CengageNOW 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 The sec and csc answers the HW system is expecting are switched on some versions of the problem. If you have everything else correct, just switch those two answers for full credit.
REMEMBER: s and c switch... sin and csc, cos and sec are the correct pairs of reciprocal functions.

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 34,etc. Hint: If the the Greek letters for alpha and beta do not show up on your equation palette, the for the letter alpha, type "alpha", for beta, type "beta".

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 #10: The sec and csc answers the HW system is expecting are switched on some versions of the problem. If you have everything else correct, just switch those two answers for full credit.
REMEMBER: s and c switch... sin and csc, cos and sec are the correct pairs of reciprocal functions.

HW34A #14: Some versions of the 45-45-90 triangles are not working correctly. Essentially, the sides opposite the 45 degree angles are indeed always equal, but it does not count that as correct on all versions of the 45-45-90 triangle problems. If this happens to you, then the problem typically wants the answer for the side to be the same as the length of the hypotenuse, or you can logout and then log back in to get a more cooperative version of the problem.

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: No new hints are needed.

HW35B #12 The sec and csc answers the HW system is expecting are switched on some versions of the problem. If you have everything else correct, just switch those two answers for full credit.
REMEMBER: s and c switch... sin and csc, cos and sec are the correct pairs of reciprocal functions.

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 38A #2 – The problem asks for seconds, but it actually want minutes for the answer, which makes sense.

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:** 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 & 42B #2 - 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 42A #15 – Use exact answers, not approximations.

HW 43 & 43B SLOPE-INTERCEPT FORM – Although it appears to be random and rare. Some versions of the problems do not want you to simplify some of the fractions when using the slope-intercept form of an equation of a line. For example 6x+8y=16, solve for y; 8y=-6x+16, then divide by 8, y=-(6/8)x+16/8. Normally you would simplify to…y=-(3/4)x+2, but occasionally the system wants a somewhat unsimplified answer… y=-(6/8)x+16/8 or y=-(6/8)x+2 or y=-(3/4)x+16/8.

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, CengageNOW is fine with something like r=5/tan(theta) instead of r=5*cot(theta), which would eliminate the fraction. Further, CengageNOW 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).

HW 43 #10 part A - Some versions of the problem are giving you a point such as (9,y) and asking to solve for y, but there are no real solutions. If this happens to you, then logout and then log back in to get a valid regenerated version of the problem that does have solutions for that part of the problem. If you keep getting unlucky, then and if in the process of solving for the y coordinate you keep getting y^2=negative number, then try setting y^2 to the absolute vale of that negative number. Fro example, if you get y^2= –11, then set y^2 = 11 and then solve for y.

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.