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.

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 3B #4, 5: - Check the similar odd problems and their answers in the book.

HW 3, 4, 5… General ... You can use frac(a,b), but don't have to. I don't use it except on very rare occasions, even if iLrn asks me to use frac(a,b). The fraction 'x+1 over x-2' would be frac(x+1,x-2) or abstractly frac(Numerator polynomial, Denominator polynomial). I cannot recall an iLrn problem that asks for frac that doesn't allow you to use the box over a box fraction template located on the left side of equation window. I almost always use the fraction template.

HW 3, 4, 5, ... We want answers factored as much as possible for almost all problems. Exceptions will normally be noted in lectures.

HW 3, 4, 5, ... As to the form of the answers iLrn and I would expect, we never want complex fractions (fractions within fractions, as mentioned in lecture), so you need to manipulate what you have to get rid of the extra fractions you have in an answer if you end up with a complex fractional answer.

HW 3, 4, 5, ... You can use frac(a,b), but don't have to. I don't use it except on very rare occasions, even if iLrn asks me to use frac(a,b). The fraction 'x+1 over x-2' would be frac(x+1,x-2) or abstractly frac(Numerator polynomial, Denominator polynomial). I cannot recall an iLrn problem that asks for frac that doesn't allow you to use the box over a box fraction template located on the left side of equation window. I almost always use the fraction template.

HW 5B #'s 1, 5, 6, etc: Answers should never be written as complex fractions (fractions within fractions). Otherwise, typing answers in a very similar form as the back of the book should work just fine on these 3 problems and the other problems as well.

HW 6B #5 - Entering a variable that has a subscript (v sub zero, for example). This occurs on only one problem on this assignment, but shows up other times this semester as well.
1) Use the subscript template (under one of the menu choices along the top of the equation palette that has the square root and nth root templates) and find the template that has the regular 'box' and just the one smaller subscript 'box' to its lower right side.
2) Use zero '0', not 'o', 'O', or the Greek letter theta.

If the picture on **HW 7B #3** doesn't show up for you, it is based on Sec 2.2 #30 page 72. See the picture there. The problem number is normally listed when you take an assignment, so the corresponding book problem is certainly a resource you can use when things are amiss such as this.
Problems with multiple blanks are still usually graded on an all or nothing basis. However, some problems like this will occasionally give partial credit for having one of the boxes filled in correctly. If you get partial credit on a problem it simply means part of your answer is correct and part of it is incorrect.

HW 9B #1: The answer they are looking for is a decimal number for the top/sides margin.

HW 9B #3:
On entering (v sub zero) squared.
1) Use parentheses around v sub zero, then square the quantity.

2) Use the subscript template that has the main box and just the one smaller subscript box.
3) Use zero '0', not 'o', 'O', or the Greek letter theta.
The subscript template is on the palette. I think it is the 3rd or 4th button along the top of the formula window.

HW 9B #4: There are two algebraic solutions, iLrn/ThomsonNOW is the looking for only the one solution of those two that makes the most sense. If you are unsure, try one of your solutions and then try the other one if that first one doesn't work.

If the picture on **HW 9B #6** doesn't show up for you, it is based on Sec 2.3 #78 page 87. See the picture there. The problem number is normally listed when you take an assignment, so the corresponding book problem is certainly a resource you can use when things are amiss such as this.
Problems with multiple blanks are still usually graded on an all or nothing basis. However, some problems like this will occasionally give partial credit for having one of the boxes filled in correctly. If you get partial credit on a problem it simply means part of your answer is correct and part of it is incorrect.

HW 9B #7: This really applies to the entire semester, but do not round early in the your solutions to problems. Always, wait until to the very end of the problem and then as the very last thing round off your answer.

HW's 11, 12, etc. - INTERVAL NOTATION: Use 'cup' for the union symbol and 'inf' and '-inf' for positive and negative infinity respectively. On most problems iLrn will accept the union and infinity symbols that can be found on the palettes above the equation window, but there are some problems that explicitly require using 'cup' and/or 'inf' or '-inf'.

HW's 11, 12, etc. - Remember intervals should be written from left to right, from negative to positive, (2,5) not (5,2) or like (-3,6) not (6,-3). Also, if you have more than one interval, those should also be listed from smallest to largest from left to right. Otherwise, it's a like writing a sentence backwards, you can still figure out what it is saying but the grammar is patently incorrect.

HW11B #7 - a mixture of fractions and decimals "7/2.25"is never acceptable as an answer. You needed to multiply the numerator and denominator by 4 or 100 in this case and then reduce the fraction.

HW's 12, 13, etc. - GRAPHS, READING COORDINATES - you should indeed generally assume that the major points on a graph given by iLrn/ThomsonNOW (points, maximums, minimums, x-intercepts, y-intercepts, etc.) are usually some exact and relatively easily found value. Do not try to guess whether an x or y coordinate value is 1.9 instead of 2 or as another example 1.4 instead of 1.5. If it is close by your estimation, then assume the value is 2 or in the second case 1.5.

HW12A #3 - which is a find the distance problem. Many of these answers can be reduced (and should really be reduced), sqr root of 100 is 10 for example, but the iLrn system is counting some of these reduced answers incorrect. So, for example, use sqr(100) if 10 doesn't work.

HW12B #7: iLrn/ThomsonNOW wants an inequality rather than interval notation.

HW12B #8: Note: The car must be moving to have a real braking distance.

HW12B #10 - This problem requires a method of 'factoring by grouping', we have not done any problems using that method, but you should have seen that before and know how to do that. If not, then p.38 Example 10 gives some examples of how to do that. The second of the 3 examples in 'Example 10' will be the most useful. I will not require you to do factoring by grouping on quizzes and exams.

HW's 13 etc. - x and/or y intercepts on the HW, quizzes, and exams.

The x and y intercepts are really points on the graph, not numbers. They are points where the graph of a function intersects the x-axis or y-axis. Your textbook often refers to them as numbers, and some online homework problems will occasionally refer to them as numbers, but in reality they are points. Most online HW problems will require you to enter x and y intercepts in point form, '(- 4,0)' not '- 4' for example.
For quizzes and exams, when a question asks you to find x and/or y intercepts, the answer(s) expected will always be the actual points not just the numbers. For example (good answer : 'the x intercepts are (3,0), (-5,0)' , bad answer: 'the x intercepts are 3, -5').

HW 13A #8, 9; 13B #5 - the numbers may not work out nice. Estimate the coordinates of the points to two decimal places. Do not round off any decimal numbers you calculate early in the problem, you will introduce error. Only round to two decimal places on the very last step of computing your answers.

HW 13B #6 - use interval notation to describe the values of 'a' for your answer.

HW 13B #7 – For the correctly simplified form of the answer iLrn/ThomsonNOW is looking for, check the problem and answer for the similar odd numbered problem from the book. The form is basically ax+by=c, where a, b, and c are integers. NOTE: 2x+4y=6 simplifies to x+2y=3.

HW 14B #8 Some versions of the problem want the unsimplified radical form like sqr(96) instead of the truly correct 4sqr(6). Why? I have no idea.

HW 15A #5,6 & 15B #1 The fill in the blank does not always recognize an answer like y=2/3x-7, it thinks you are dividing 2 by 3x. Anyway, sometimes the above answer will work, but otherwise try one of these, 'y=2/3*x-7','y=(2/3)x-7',or 'y=(2/3)*x-7' all seem to work fine.

HW 15 General Hint: If a problem doesn't specify which form of the equation of the line it wants, then usually it wants slope-intercept form. Like y=m*x+b or P=m*h+b.

HW 15B #8 step 1
Use '100' and '40' instead of '1' and '0.4'. The whole number percentages.
Also, leave the slope and P-intercept in reduced fraction form when you type in your equation.
Remember: **When iLrn is not as specific as you would like as to how it wants an answer, then the answers to similar problems in the back of the back of the book and those given in the lectures are often a very good general guide as to how to type answers into iLrn.**
HW 15B #8 step 2 The second part of the problem wants an exact decimal answer, not an approximation. Do not use a '%' symbol either. 10.15% should be typed in as '10.15' for the answer.

HW 15B #9 The mixture of fractions and decimals in your slope will not work as a final answer. As in earlier problems leaving answers with a mixture of fractions and decimals is not considered a correctly simplified form of a fractional answer. Multiply the numerator and denominator of your slope by 10 that will work, assuming your slope is correct. For example '1.7/22' should be typed in as '17/220'.

HW 16B #6
This is an old problem I have used for a few semesters. I am not sure why it is not working correctly.
Here's the "code" you need:
In the denominator:
Use 1 instead of 2.7...
Use 4 instead of 5.4...
Use 9 instead of 8.1...
So the denominator of the function should be:
x2-1 or x2-4 or x2-9
Then the problem will work correctly.

HW 16B #10
In Section 3.4 problem #13, which is not on the assignment sheet, the answers in the back of the book have the denominators rationalized. The answers on the even answer overheads in recitation are also rationalized for that type of problem (#14). This is also what I did in my lectures. Anyway, online HW 16B #7 wants the answers in the non-rationalized form. This is easier for you, but keep in mind that problems like that on quizzes and exams are expected to be rationalized like the two book problems mentioned in this paragraph.

HW 16, 17, etc. When given a graph of a function
With graphically defined functions that appear in iLrn and in the book, you should indeed generally assume that the major points on a graph (endpoints, maximums, minimums, x-intercepts, y-intercepts, etc.) are usually some exact and relatively easily found value. Do not try to guess whether an x or y coordinate value is 1.9 instead of 2 or as another example 1.4 instead of 1.5. If it is close by your estimation, then assume the value is 2 or in the second case 1.5.

HW 17, etc. Some hints/requirements on answers for types of problems asking you to find a function:
Try using 'V=expression' instead of 'V(x)=expression'.
Try using 'd=expression' instead of 'd(t)=expression'.
Occasionally, iLrn even incorrectly accepts or wants the 'expression' only.
** As I also mentioned (and demonstrated) in lecture, on in class quizzes, use the function notation for your final answer.
'V(x)=expression' instead of 'V=expression'.

HW 17, etc.
If the function is defined at a particular value of x on an increasing or decreasing interval, then the book and therefore iLrn want you to include that value by using a square bracket. Mathematician's differ on this issue of which bracket is appropriate. Again, for our purposes, if the function is defined at a particular value of x on an increasing or decreasing interval, then you should include that value by using a square bracket.

HW 17A #7: The answer should not be simplified, do not multiply out your expression for the Volume.

HW 17A #8 - If the picture is not showing up completely, the picture from the book Section 3.4 #68 page 169 should work for now for that problem.

HW 17B #8 and #10:
As on the even answer overheads for Section 3.4 #70 from page 173 in the book. iLrn wants the expression under the radical to be simplified by multiplying out and combining like terms for the answers to both of these problems.

HW 17B #9: Do not simplify the number under the radical.

HW 18A #5 Something like: y=-2f(x-5)+3, y=6f(x+2)-7 should work as a format for typing in the answer.

HW 18B #4
If you have more than one group of numbers, then:
(-2,0)union symbol(3,5], where you can use the palette or 'cup' to insert the union symbol. This is consistent when using interval notation.

HW18,19, etc. General Hint- You need to keep in mind that the order you do the transformations in important. Sometimes critically so. If you put a value of x into your function, or look at a specific point on the black graph, and then follow the order of operations for the function, then that is also the order of the transformations. Cause and effect. If you do this carefully with your incorrect answer, I think you will see why it is incorrect.

HW 19A #5, 6, etc
f(5) simply asks, 'What is the y-value/output value of f when the x-value/input to f is 5?'
A piecewise function simply divides the x-values/inputs into different groups. For each of these groups of x-values/inputs, a specific way to find the corresponding y-values/outputs is also given. So referring to the example above, 'Which group of x-values is 5 a part of?' That will then determine how you calculate the corresponding y-value.

Reminder about square root expressions: Below 'sqr' means square root.
sqr(9+16) = sqr (25) = 5
sqr (9) + sqr (16) = 3 + 4 does not equal 5. This second way simplifying sqr(9+16) is incorrect.
Additionally as a reminder, below you can factor 9 out of each term under the radical and then break off a sqr(9) which equals 3.
sqr(18+9t)=sqr(9)*sqr(2+t)=3*sqr(2+t)

HW 20, 21 etc. Some hints/requirements on answers for types of problems asking you to find a function:
Try using 'y=expression' instead of 'f(x)=expression'.
Try using 'V=expression' instead of 'V(x)=expression'.
Try using 'd=expression' instead of 'd(t)=expression'.
Occasionally, iLrn even incorrectly accepts or wants the 'expression' only.
** As I also mentioned (and demonstrated) in lecture, on in class quizzes, use the function notation for your final answer.
'V(x)=expression' instead of 'V=expression'.

HW 20 General Hint - a couple of students have indicated a problem with iLrn accepting decimals, so try using '1/2' or '3/4' instead of '0.5' or '0.75' respectively.

HW 20B #5 This problem regarding increasing/decreasing intervals is not consistent with the book's notation or what we have said in lectures. So to be consistent with the book's notation and what we said in lectures, that if a function was defined for a value of x, then we would include that value with a square bracket for increasing/decreasing intervals. This problem wants the round bracket used for increasing/decreasing intervals. So, on this problem only, use (-inf,5) not the usual (-inf,5] for example.

HW 21A #3 and in general - If a problem asks you to find a function or equation for 'A' don't use lower case 'a' for the variable. Use 'A' or 'A(x)' not 'a' or 'a(x)'.

HW 21A # 4 - frog problem - Try using all fractions in your answer like '9/4' instead of '2.25', etc. In general, the mix of fractions and decimals in the same answer is usually not good either.

HW 21A #5: Enter your answer as an exact decimal answer, for example 3.0625, etc.

HW 21B #1,2,3: - These problems ask for a function and the domain of that function. Note: They want a real world domain. For instance, the length of the side of a triangle x would have to be positive or x>0.

HW 22 General: - On the problems involving the domain of a composition of functions, to calculate the composition g(f(x)), you first have to able to calculate f(x).

HW 23 General: Unless a problem asks for an approximation 'the square root of 3' is better than '1.7' in iLrn.

HW 24 General: Using interval notation for a single value, we've used a different bracket, {a}, instead of just a or [a].

HW 24A #6, #8 and HW 24B #9, #10 in ThomsonNOW, ThomsonNOW wants a multiplied out polynomial for the answer. If you are not sure what I mean, then go to the Example on p.232 of your book or check the answers for the similar types of problems in the back of your book.
NOTE: for quiz purposes, multiplying out is not required, the factored form is fine.

HW 24B #6: For this polynomial long division problem ThomsonNOW simply wants two expressions for the quotient and remainder, separated by a comma. For example: '3x+4,2x-7'.

HW 25, 26 - For finding rational functions problems, you should generally have 'f(x)=' or 'y=' and then one simplified polynomial function divided by another simplified polynomial function. Similar to polynomial functions, multiply out both the numerator and denominator polynomials.

HW 26A #8 - Use a decimal instead of a fraction 19.5, instead of 39/2.

HW 26A #9 - Does not require you to multiply out the numerator and denominator polynomials of the rational function.

HW 26B #8 - Do not multiply out the numerator and denominator polynomials of the rational function. Leave the numerator and denominator in a factored form.

HW 26B #10: Do not use decimal coefficients in the numerator and denominator polynomials for the entered form of your answer. Simplify your rational function by multiplying by 10/10 or 100/100 and then looking for common integer factors in the numerator and denominator polynomials that can therefore be simplified. A different way of saying this is that the coefficients in the numerator and denominator polynomials of your rational function must be integers and that common factors should be used to reduce the integers to being as small as possible.

HW 27 General: In ThomsonNOW, 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 ThomsonNOW 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 28 - I could think of no appropriate hints. The problems are quite well behaved.

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.)