WebAssign Homework Hints: Lessons 24 – 34

Lesson 24 assignment:

- On problem #1, do not start by plotting points. Simply use the graphing tools available (tutorials are available on the graphs before you begin). The option to select open or closed endpoints should be available near the bottom of the graph.
- Do not approximate unless the directions say to do so; enter exact answers.
- Keep in mind that increasing, decreasing and constant intervals are ALWAYS written in terms of inputs (x-values).
- On problems #4 – 7, it might be helpful to use specific values from each interval first, then use those values to find the general expressions for each interval. Be sure to simplify each expression **completely**.
- On problem #6, don't forget to include the selling price of each book when finding the piecewise-defined function. If each book sells for $12, this needs to be included as part of the author's royalities.

Lesson 25 assignment:

- Keep in mind that increasing, decreasing, and constant intervals are ALWAYS written in terms of inputs (x-values).
- On problems #3 – 5, the axis of the parabola is a vertical line about which the graph is symmetric (this is not the standard equation of a parabola). Think about how to write the equation of a vertical line.
- On problem #8, simplify the equation completely.

Lesson 26 assignment:

- **DO NOT APPROXIMATE; if your answer contains a fraction, enter a fraction in WebAssign, do enter a decimal approximation.**
- Set-up problem #3 just like problem #2. Express the length of the rectangle y as a function of the width x, then express the total area of the rectangle A as a function of x.
- On problem #4, the directions state "the maximum height off the ground is $3a$ feet", then a value for a is given. Keep in mind that this is **NOT** the same as a in $y = a(x-h)^2 + k$. This should be obvious since the a provided in the problem is positive, but the parabola is opening downward.

Lesson 27 assignment:

- On problems #9, 10, and 11, write two functions based on the information given in the problems, then write a composition of the two functions.
- To include the π symbol on problem #9, simply type pi.
- On problem #10, use the calcPad to enter a cubed root $\left(\sqrt[3]{\ }\right)$. Click on the answer box to make calcPad appear, then click Functions to find the n^{th} root option.
- On problem #11, be sure to factor completely.

Lesson 28 assignment:

- On problem #7, because there are restrictions, it might be best not to cancel out the common factors.
- On problem #11, in order to solve the inequality $R > S$, a substitution needs to be made (an equivalent expression should be provided for R).

Lesson 29 assignment:

- On problem #8, plug-in the x-coordinate and the y-coordinate of the given point, then solve for k.
- On problem #9 part a., be sure to factor your answer **completely**.

Lesson 30 assignment:

- Do not approximate unless the directions say to do so; enter exact answers.
- Decimals are fine as long as they are exact and not approximate.
- There is no need to convert from one unit to another on any variation problems. The constant of proportionality (or constant of variation) contains all necessary units.
- On problem #5, it might be helpful to convert all decimals to fractions before attempting to find k. Also, it might be best to leave k as a fraction.
- On problem #6, keep in mind there 5,280 feet in 1 mile.

Lesson 31 assignment:

- Do not approximate unless the directions say to do so; enter exact answers.

Lesson 32 assignment:

- **DO NOT APPROXIMATE; if your answer contains a fraction, enter a fraction in WebAssign, do enter a decimal approximation.**

Lesson 33 assignment:

- Read each problem slowly, carefully, and repeatedly.

Lesson 34 assignment:

- On problem #1, verify that each graph represents a function (passes the vertical line test) first, before verifying whether it represents a one-to-one function (passes the horizontal line test).
- On problem #8, use the domain of the original function f, and the function itself, to find $f^{-1}(x)$.
- On problem #10, use the range of the original function f, and the function itself, to find $f^{-1}(x)$ and the domain of $f^{-1}(x)$.