LaTeX: using code to type Math

LaTeX is a coding language that allows you type math equations in a way is clear, concise and looks pretty! Most math textbooks use latex for their math type. Since you are required to create a solutions booklet in word that contains full solutions to your chosen questions, the site <http://quicklatex.com/> is going to help you with the math text in your solutions.   
Typing in LaTeX is very intuitive but does require a bit of prior knowledge. In Quick Latex, all math equations start with the same command

\begin{align\*}

\end{align\*}

You put all your math code in between the two commands. In this course, we have dealt with a variety of math operations (quadratics, trigonometry, angles, fractions) all of these operations have special commands in Latex. Most special commands in Latex start with a backslash: \

Here are some common commands that you will be using depending on the unit you have:

|  |  |  |
| --- | --- | --- |
|  | Command | Output in LaTex |
| **Inequalities** |  |  |
| Less than | < x<3 |  |
| Less than or equal to | \leq x \leq 3 |  |
| Greater than | > |  |
| Greater than or equal to | \geq |  |
| **Exponents** |  |  |
|  | *base*^{*a*}; x^2 |  |
| **Fraction** |  |  |
|  | \frac{*numerator*}{*denominator*};  \frac{3}{4} |  |
| **Math Operations** |  |  |
| Addition | + |  |
| Subtraction | - |  |
| Multiplication | \cdot |  |
| Division | \div |  |
| Equal | = |  |
| **Trig and Angles** |  |  |
| Theta | \theta |  |
| Degree | ^{\circ} 60^{\circ} |  |
| Sine | \sin \sin(\theta) = \frac{1}{2} |  |
| Cosine | \cos |  |

Couple hints:  
- If you type \\ at the end of your statement, latex will jump to the next line  
- Using the command &= will align all your equal sign in a multistep equation  
- Quick latex allows you to copy and paste your math type right into your word document.

Try a few…

Using the commands above, type the necessary code into Quick Latex to obtain the following math equations:

|  |  |
| --- | --- |
| OUTPUT | CODE Copy/Paste the code you used for reference |
| http://quicklatex.com/cache3/7c/ql_3fbe59d5e61537af1fdc08cdb9b8fa7c_l3.png |  |
| http://quicklatex.com/cache3/0a/ql_c7f12af35db4a71d34b28da93a48950a_l3.png |  |
| http://quicklatex.com/cache3/4f/ql_30a0726c65987d0c83bcb510bcc1204f_l3.png |  |

It is likely that I have not included ALL math commands you may need to type your math equations. Google has many LaTeX resources and all commands can be found easily.