Intermediate Algebra Homework Philosophy
The purpose for this communication is to explain the philosophy of assigning homework as part of our intermediate algebra with college foundations math courses. The philosophy is shared by all members of the intermediate algebra collaborative team. The explanations that follow will include why we assign homework, why we limit the amount of time needed for completion of homework, and why we limit the number of problems assigned per homework assignment, and why we make resources available to help complete the homework problems.

We will also explain the concept of “mixed and spaced” homework and the reason why we make our homework “mixed and spaced.” Finally, we will explain why and how we assess homework completion, and how this assessment will factor into your student’s college foundation’s overall grade.

Here’s why we assign homework:
We feel that completing quality homework assignments is an essential element for students as they work to become mathematically proficient in all of the state standards for math. We not only want students to become proficient, we want them to stay proficient as a math student. We believe that by completing quality homework assignments that are both “mixed and spaced” that the students will be more likely to retain this proficiency. Students will not only be able to demonstrate proficiency on the MCA and ACT math tests, but also retain this mathematical proficiency for use beyond high school.

Here’s why we limit the homework assigned, as well as a look at the actual amount assigned:
We feel that homework shouldn't be something that causes stress and anxiety every night. However, there should occasionally be questions that challenge you. This challenge should create a bit of a struggle. Through struggle, we believe students will learn and retain their math skills. However, we don’t want students to struggle too much. We recognize that math is not the only class that assigns homework, and that students have many aspects of their lives that keep them busy day after day, week after week throughout their high school careers.

So with all that said, we believe that the amount of time needed and the number of problems assigned for math homework should be limited. We believe consideration should be taken when choosing the problems being assigned. We also believe resources should be available to help alleviate any struggle that becomes too much.

Below you can see the breakdown for the homework problems assigned for each week of the current trimester. The textbook is written so that homework problems are written using numbers with a dash (-) between them. The number before the dash simply indicates the chapter number and the number after the dash indicates the problem number. So, 2-9 means chapter 2 problem 9.

So by looking below you will see that out of 14 days of school this trimester, we have assigned homework on seven of those days. Over those seven days that we have assigned homework, We have assigned a total of 19 problems. We typically don’t have time to work on these problems in school, so the expectation for students is to spend twenty minutes outside of class doing homework on any given day that homework is assigned.

We tell students that if an assignment takes more than twenty minutes, then stop and ask for help the next day.

Here’s a look at the homework assigned so far this trimester:

Week #1:
p.59 #2-9
Here’s how and why we assign “mixed and spaced” homework:
"Mixed and spaced" is the phrase we use for mixing and spacing many different types of math problems on any given assignment. Here’s an example of how we “mix” the problems. Even though students learn to factor quadratics last trimester, factoring problems can continue to present themselves on any of the homework assignments given this trimester.

We don’t want students to only use their skills once and then be done. We want student to have the opportunity to "spiral" back and practice the skills they have learned in previous chapters, trimesters, or even previous courses they have taken. Therefore, we “space” the different problems throughout the course.

This means not all of the homework problems will be fresh in the mind of your student. However, by providing these opportunities to practice older skills, we believe students will be better prepared to use these skills when needed in future math classes or on high stakes math tests like MCA and ACT tests.

Here’s a look at the resources available to help alleviate stress when working on homework:
We recognize that the “mixed and spaced” approach to assigning homework may create struggle for students trying to recall these previous skills that they have learned. This struggle may cause anxiety and frustration, which can lead to students shutting down and leaving their assignments incomplete. In attempt to alleviate some or all of this frustration, we have provided your student with resources that can help.

In class, I have reviewed how to access the student resource page on our intermediate algebra website (this now requires a log-in with student username and password.) Click here to go to the student resource page.
You may also click on this link to go to the selected solutions page. Here your student should check your answers for correctness.

Maybe the most helpful piece found on the resource page is the “homework help” provided by our textbook. By accessing the homework help online (students have had the opportunity to access homework help in class,) students will be able to click on a link which will give a hint to get the problem started. This is especially helpful when the homework assignment involves a math skill that we haven’t used in for a few weeks or more.

By clicking on the link students will have help recalling previous knowledge. Another way to access the homework help on the assignments is to have your student login to their “lock and key.” From the rapid identity page they can click on the CPM link. This link will take them to an online version of our textbook. From here they can see the exact text seen in their book. The only difference is that they will also find a link at the end of each problem that says “homework help.” This link will take them directly to the hint given for that problem.
I am also available before school from 7:10 to 7:35 everyday but Wednesdays. I am also available after school from 2:20 to 2:50 everyday but Mondays. My goal is to give similar hints (similar to homework help) to help students get their own thinking and problem solving skills started. My goal is that the homework is a source for students to get thinking about math. As teachers, we want to do our best to avoid the situation where students watch the teachers solve the problems. This is often times watching rather than thinking. Getting students to think through the problems themselves requires students being engaged in the problems. Being engaged requires students be confident that they can understand and solve.

Gaining confidence may mean students go to their teachers room after school. Here they can work on homework and the teacher will check their work after each problem. If a student knows they solved the problem correctly, they will build confidence. If a student made a mistake, the teacher can help identify the mistake. Correcting the mistake will also lead to more confidence.

We tell our students that you aren’t done with your homework assignment until you have self graded the homework. That means if you choose not to come to the teachers room after school to correct your homework you can access the solutions to the homework from the website (the link for “selected solutions” is above.)

We believe that students should have the selected solutions page open when doing the homework problems. This is the easiest way to quickly check each problem as they finish them. Students shouldn’t wait until all problems are done to check. Check as they go.

In addition to going to your teacher’s room after school for help, student may go to the IMC after school from 2:40 to 5:00 everyday but Friday. This is a student study center called “Husky House.” Two out of four days every week another math teacher from the intermediate algebra collaborative team will be in the IMC waiting to help students. These teachers will know exactly the lessons that are being taught to your student, because they are teaching the same lessons in their classes. Maybe getting a different teacher perspective to give your student hints and reminders will help your student more than going to their current teacher.

Some days an intermediate algebra teacher won’t be in “Husky House.” Don’t worry though because their will always be at least one math teacher able to help.

Another option for getting hints on the homework is during WIN time. WIN time takes place occasionally during advisory period on Tuesdays. Students need to be aware which Tuesdays are WIN time Tuesdays. When it’s WIN time they should use the time to visit with a math teacher.

If using the online resources or visiting a math teacher in person aren’t working for students they may use the internet. Searching google or youtube for the learning target that the homework is addressing will result in many tutorials on the subject. This probably takes more time, but the more time you invest the easier it becomes in the long run.

Gaining confidence in math will often take perseverance. We understand that understanding math doesn’t always come quickly to students. It’s a process. A process that takes focus, determination and a bit of grit. All parties: students, teachers, and parents have to remember that this is a process. A process which requires consistent day to day attention and perseverance throughout the entire course. This attention and perseverance is needed by students both during the lessons in class and the homework done outside of class. Teachers can help students maintain perseverance during class while parents can help students maintain perseverance outside of class while students work on the homework assignments.
Here’s how we assess homework completion:
Our goal for third trimester is to assess student homework once a week. We will choose one of the assignments given for a particular week and have students self assess the quality of their work. Students do this by checking boxes on a half sheet of paper. The boxes indicate that, for the assignment we are checking, the student has met that standard for quality.

We expect to see the following when assessing students for “quality” homework assignments:
1) Every problem is attempted, and the assignment is properly labeled and organized in their graph paper notebook where all assignment are to be completed.
2) Evidence or justification is shown for the answer that the student concluded.
3) The final answer is clearly marked by circling or boxing it in.
4) Evidence is provided that they self graded their work by checking the solutions in the back of the book.
   We tell students to star the answers they got correct on the first try, and place a checkmark next to any problem they got wrong.

While students are taking a test, the teacher will circulate around the room verifying the student’s self assessment with the teacher’s assessment on the homework. If the teacher feels changes to the grade are needed, the teacher will explain that to the student. Otherwise, the grade given by the student is the grade recorded in the grade book.

The grade in the grade book reflects a score for all homework assignments given for that week. The score is out of 4 and is equal to the number of boxes checked for meeting the four expectations above.

Because this isn’t a test or a true indication of a students understanding of the math standards, this score is recorded in the college foundations course as opposed to the intermediate algebra course. We believe that completing quality homework is an indication of thinking and learning. Learning how to think and learn is critical to success beyond high school whether that is college or something else. Because having the grit and determination needed to complete quality assignments are critical skills for future success, we count quality homework completion as 40% of their overall grade in the college foundations course.

Here’s what we do if a student isn’t prepared to assess their homework when the deadline hits:
We give students three “late passes.” A late pass can be used when a student didn’t have an assignment done that was being checked for that week. A student may say, “I will have this done for you on Monday and I will use one of my late passes.” When they use a late pass like this they must not only show the teacher the assignment that was being checked for that week, but they also must show the completed assignments for each assignment given for the entire week. If they show quality work for all assignments that week, then they can earn a score for full credit for that week’s homework assignment. Once they use all three passes, they will no longer be able to turn in late work, and a zero will be recorded in the grade book.

If a student isn’t prepared to assess homework for that week because of absences, then the student will follow the same guidelines as above, but they aren’t required to use a pass.

Here’s a summary:
We believe that by completing the assigned twenty minutes of homework with an honest, engaged effort which includes self grading and finding and correcting errors, that students will be able to successfully reach proficiency as math students. The rest of the information explains how to get help and the strategies we use to assess and hold students accountable for following through with this important exercise.