Fundamentals of Mathematics I  
Math 130A

Course Objectives

1. **Gaining factual knowledge including the mathematical notation and terminology used in this course.** Learn the vocabulary, symbolism, and basic definitions used in arithmetic, geometry, and beginning algebra.

2. **Learning fundamental mathematical principles, generalizations, and properties arising from the concepts covered in this course.** Become familiar with the basic operations on the real numbers and polynomials; the properties of the real numbers; solving first-degree equations; and the formulas for finding perimeter, area, volume, surface area, and circumference.

3. **Learning how to apply course material along with techniques and procedures covered in this course to solve problems.** Use the facts, formulas, and techniques learned in this course to solve a wide variety of application problems to include percent, geometry, and proportions.

4. **Providing students with the basic skills and knowledge necessary to pass the mathematics section of the THEA test and to be successful in college-level mathematics courses.** Acquire a level of proficiency in the fundamental concepts of arithmetic, geometry, and beginning algebra to promote success on the math section of the THEA test and in college-level math courses.

Course content

Textbook: *Prealgebra*, Fourth Edition, by Aufmann, Barker, Lockwood. The following chapters including particular sections listed are covered. (See textbook “Contents.”)

1. **Whole numbers.** Standard notation; addition, subtraction, multiplication, and division; rounding; estimating; application problems; divisibility rules; properties of whole numbers; order of operations; exponents; and evaluating algebraic expressions.

2. **Integers.** Number line; addition, subtraction, multiplication, and division; properties of integers; and absolute value.

3. **Fractions.** Factors; multiples; addition, subtraction, multiplication, and division; mixed numerals; complex fractions; and application problems.

4. **Decimals/Real number system.** Notation; addition, subtraction, multiplication, and division; rounding; fractions to decimals and decimals to fractions; application problems; approximation; number line; properties of real numbers; and reducing radicals.

5. **Variable Expressions.** Addition, subtraction, multiplication, and division; laws of exponents; use of distributive property; and translation of verbal expressions into variable expressions.

6. **First-Degree Equations.** Techniques in solving first-degree equations; application problems; and the rectangular coordinate system.

7. **Measurement and Proportion.** Dimensional analysis; ratios and rates; proportion; and direct and inverse variation.

8. **Percents.** Basic percent equation; percent problems; and writing percents as fractions and as decimals.

9. **Geometry.** Classifying angles; sum of angle measures of triangles; classifying polygons; perimeter and area of squares, rectangles, triangles, parallelograms, trapezoids, and composite figures; area and circumference of circles; volume and surface area of rectangular solids, cylinders, spheres, cones, and pyramids; vertical, corresponding, and alternate interior angles; congruent and similar triangles; and the Pythagorean theorem.

10. **Statistics and Probability.** Mean, median, mode, and graphs.
Fundamentals of Mathematics I
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Code of Conduct: 
Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code, which is available on the web at http://www.angelo.edu/forms/pdf/honorcode5.pdf.  

Statement on Disability: 
"Persons with disabilities which may warrant academic accommodations must contact the Student Life Office, Room 112 University Center, in order to request such accommodations prior to any accommodations being implemented. You are encouraged to make this request early in the semester so that appropriate arrangements can be made."  

Other Classes: 
Math 130A.150 TTh 12:30 – 1:45 MCS 112  
Math 1303.020 MWF 9:00-9:50 MCS 216  
Math 1312.020 MW 12:00-1:15 MCS 210  
Math 1312.040 TTh 9:30-10:45 MCS 212  

Office Hours: 
Monday: 8:30-9:00, 10:00-11:30, 1:15-2:30  
Tuesday: 8:30-9:30, 1:45-2:15  
Wednesday: 8:30-9:00, 10:00-11:30, 1:15-2:30(MathLab)  
Thursday: 8:30-9:30, 1:45-2:15  
Friday: 8:30-9:00, 10:00-11:30  
I will be in the Math Lab on Wednesdays from 1:15-2:30  

Math Lab: 
All classes  
MCS 215 M-Th: 2:00 – 5:00, F: 2:00-4:00  
MCS 211 M – Th 6:00 – 8:00 PM  
Developmental Classes  
MCS 211: M – F 1:00-4:00  

Important Dates: 
Look on the webpage for exam dates, drop date and holidays (Calendar)  

Grading: 
A: 90 and above  B: 80 – 89  C: 70 – 79  D: 60 – 69  F: below 60  

Exams: 4 Exams  
Final Exam: Comprehensive – everybody must take exam – no exceptions  
HW: will be assigned on a daily basis – you will be expected to have HW done by next class meeting see a more detailed description of requirements  
Quizzes: short quizzes – part of HW – should be turned in with HW  
Long Quizzes: – these make up your Quiz average and are turned in during class  

Grading Distribution  
Exams: 68 % of grade  Final Exam: 20 % of grade  HW: 6 % of grade  QZ: 6 %
HW:
Hw will be assigned in the following format:

1) 5 – 10 problems will be due the very next class meeting – if you are not able to be in class, turn HW in early or have a classmate turn HW in for you. Other problems assigned for the day will not be due until Wednesday of the next week (HW assigned on MWF will be due on Wed).
Use the form posted on webpage to turn in the daily HW problems.
(answer sheet (Word or PDF)

2) Rest of the HW will turned in a complete FOLDER (not loose, not stapled – but in a folder)
   If you forget it in your car, dorm, home – you will not be allowed to turn it in.

3) These two will make up your HW grades:

   75% (10 problems), 20% from the folder

   Process will be repeated each week up to Wed. of dead week. This should give you 12-14 HW grades. I will count the top 10.

NOTES:
You are required (responsible) to have notes from the webpage as indicated in class beginning with the second day of class. Read message portion each day to find out what notes should be printed.

Bonus:
Being late to class will be considered as being absent

Encouragement – be in class and do the HW

1. If you miss 0 or 1 day (either excused or unexcused) and have turned in all HW
   I will add 2 points to your overall average - add four points to your final exam.

2. If you miss 2 or 3 days (excused or unexcused) and have turned in all HW
   add 1 point to your overall average and – add four points to your final exam.

3. If you miss up 4 or 5 days – I will add 4 points to your final exam

If you miss more than five days, no points of any kind will be added.

Long Quizzes:
1. You will have 1 long quiz before each exam. You will be told in advance when the quiz will be given. Total of four

3. I will drop one of the long quizzes and average the remaining three to give you a long quiz average.

Short Quizzes:
unannounced – part of your HW. They should be turned in with HW folder.

NOTE: NO Calculators will be allowed in class – when Instructor does allow you to use a calculator, it will not be a graphing calculator.
   NO Make-ups of any kind.
New standards for satisfying Texas Success Initiative (TSI) requirements.

If a student fails the math section of the THEA (or an alternative test), the student must enroll in developmental education. If the student falls within one standard deviation of the minimum passing standard, he/she does not have to retest. When the student successfully completes Math 130A/B, he/she has satisfied TSI requirements. If the student does fall below one standard deviation, he/she must complete Math 130A/B and must retest and pass before he/she is allowed to enroll in a college level math class. As before, if a student is only TSI required and retests and passes the THEA (or an alternative test) at any time, then he/she has satisfied remediation requirements and may drop the course.

These standards also apply to the alternative tests. The scores are listed below for your easy reference.

<table>
<thead>
<tr>
<th>TEST</th>
<th>Passing Score</th>
<th>Retest required if initial score is below:*</th>
</tr>
</thead>
<tbody>
<tr>
<td>TASP/THEA</td>
<td>230</td>
<td>206</td>
</tr>
<tr>
<td>ASSET</td>
<td>38</td>
<td>30</td>
</tr>
<tr>
<td>COMPASS</td>
<td>39</td>
<td>23</td>
</tr>
<tr>
<td>ACCUPLACER</td>
<td>63</td>
<td>42</td>
</tr>
</tbody>
</table>

* and no other score is 230 or higher

There are optional software packages available for purchase if you would like this kind of tutorial. Our bookstore carries a product called Thinkwell. There are other tutorials available through local bookstores.

Some Math Tutoring and Homework Help Web Sites
http://www.quickmath.com/
http://www.algebra.tutor.org/
http://www.fliegler.com/mathman.htm
http://www.mathsupport.com/ (this one has a fee)

THEA:
If you are REQUIRED to retake the THEA and you have not done so, you will need to do it either toward the end of the semester or as soon as the semester is over. I suggest either taking it in April (state) or May (quick test-date to be given later). The deadlines are below.
http://www.thea.nesinc.com