STUDENT MATHEMATICS ADVISING HANDOUT

You have tested! Now you face some important considerations:

- **For which courses do you qualify to enroll?**
- **Why is this choice important?**
- **Are you prepared to be successful in your chosen course?**

These are very important questions and ones that **YOU** need to consider carefully. Getting started on the right track is crucial. **Success breeds success!**

For which courses do you qualify to enroll?

- Texas state law gives students who score 350 or higher on the new TSI mathematics assessment the legal right to enroll in any first-level mathematics credit course: MATH 1332 College Mathematics, MATH 1342 Elementary Statistics, MATH 1314 College Algebra or MATH 1324 Math for Business & Economics.

But **YOU** have the responsibility to decide what is in your best interest and **YOU** have the right to choose the course in which you enroll.

Why is this choice important?

Enrolling in a course for which you are not prepared can have significant consequences:

- Grades of D, F and W can affect a student's qualification for financial aid. In many cases, if a student loses financial aid, there is no appeal.
- State law limits the number of withdrawal (W) grades a student is allowed
- Grades of D and F affect a student's grade point average (GPA).
- Grades of D, F and W affect a student's academic standing.
- Too many D, F or W grades can lead to academic probation or suspension.
- Grades of D, F and W negatively impact your ability to succeed in your academic goals.
- Grades of D, F and W can negatively impact a student's ability to transfer to a four-year institution.

Are you prepared to be successful in these courses?

- If you scored between 350 and 368, you are prepared to take MATH 1332 College Math or MATH 1342 Elementary Statistics.
- If you scored between 350 and 368 and are considering enrolling in MATH 1314 College Algebra or MATH 1324 Math for Business & Economics, you should work the problems on the reverse side of this sheet. If you are not easily able to work these problems, then enrolling in Intermediate Algebra MATD 0390 could be a more appropriate choice for you.
- The following link has the answers to the sample problems on the back of this sheet. It also provides a link to additional problems that you could work if you have some doubts or concerns. LINK

The Mathematics Department Chair and Assistant Department Chairs are available to discuss with you what course best suits your needs.

Below is a sample of the types of problems you are expected to be able to work **on the first day** of College Algebra MATH 1314 or Math for Business & Economics MATH 1324.

1. Multiply: $(4x-3)^2$

2. Factor completely: $12x^3-10x^2-12x$

3. Find the intercepts, the slope and graph the line: $3x-2y=12$

4. Identify the intercepts, find the vertex and graph: $y=2(x+1)^2-3$

5. Solve the following:

a) $-4<-2(x-1.2)\le 3$

b) $2x^2-13x=24$

c) $1+\dfrac{4}{x+1}=\dfrac{-4}{x^2+x}$

d) $3x^2-2x=6$

6. For the function $f(x)=\dfrac{3}{x-1}+\dfrac{2}{x}$

a) Find the domain.
b) Evaluate $f(3)$ and $f(-1)$.

7. Simplify the following:

a) $\sqrt{18}+\sqrt{24}-2\sqrt{50}$

b) $8^{-\frac{1}{3}}+4^{\frac{3}{2}}$

8. Solve the system of equations:

$2x+5y=10$

$3x-2y=4$

9. Suppose 6.4 million pounds of coffee beans are sold at a price of $6 per pound and 5.4 million pounds are sold at a price of $8 per pound.

a) Find the linear function $D(x)$ that represents the demand D (amount sold in millions of pounds) at price x in dollars per pound.

b) At what price would the demand be 6 million pounds?

10. A bottle contains 24 ounces of a solution that is 15% acid. How much pure acid should be added to get a solution that is 20% acid?

Answers:

1. $16x^2 - 24x + 9$

2. $2x(3x + 2)(2x - 3)$

3. x-intercept: (4,0)
   y-intercept: (0, -6)
   slope: 3/2

4. x-intercepts: $\left(-1 \pm \frac{\sqrt{6}}{2}, 0\right)$
   y-intercept: (0, -1)

5. a) $-3.2 > x \geq -0.3$
   b) $x = 8, -\frac{3}{2}$
   c) $x = -4$
   d) $x = \frac{1 \pm \sqrt{19}}{3}$

6. a) domain: $\{x | x \neq 1, 0\}$
   b) $f(3) = \frac{13}{6}$, $f(-1) = -\frac{7}{2}$

7. a) $2\sqrt{6} - 7\sqrt{2}$
   b) 8.5

8. $\left(\frac{40}{19}, \frac{22}{19}\right)$

9. a) $D(x) = -0.5x + 9.4$
   b) x = \$6.80

10. Add 1.5 ounces of pure acid.

If you would like a more detailed set of problems or would like to discuss which course is best for you, contact the Math Department.