

Math 50 – Final Exam Study Guide

Section 18, Fall 2012, Prof. Beydler

Final Exam

- Date: Wednesday, December 12, 2012 from 1:30pm to 4:00pm
- Will cover all sections in this class.
- The test will start at 1:30pm, and you'll have 2 hours and 30 minutes to finish it.
- The first part of the test you will not have a calculator.
- When you're finished with the first part, turn it in and I'll give you the second part, where you can use a scientific or four-function calculator. Graphing calculators and mixed-use devices will not be permitted (so, no using cell phones, laptop computers, etc. as calculators). If you do not have a scientific or four-function calculator, you may borrow one from the MARC if you have a student identification card.
- No notes or books during the test.
- Please visit my office hours if you need help. If you don't understand something, don't be embarrassed to stop by—I'm very patient. If you can't make it to my office hours, then feel free to e-mail me with any questions: dbeydler@mtsac.edu Also, don't forget to visit the MARC and get extra credit for doing so! (see syllabus for details)

Here are some of the formulas you'll want to know:

- Perimeter of a rectangle: $P = 2l + 2w$
- Volume of a box: $V = lwh$
- Net: $N = R - C$
- Distance: $d = rt$
- Surface area of a box: $SA = 2(lw + lh + wh)$
- Circumference of a circle: $C = \pi d$ or $C = 2\pi r$
- Area of a circle: $A = \pi r^2$
- Area of a triangle: $A = \frac{1}{2}bh$
- How to calculate mean and median
- Complementary angles: angles that add up to 90°
- Supplementary angles: angles that add up to 180°
- Pythagorean Theorem: $a^2 + b^2 = c^2$
- $$\text{GPA} = \frac{\text{total grade points}}{\text{total credits}}$$

If you need them, I'll give you these formulas on the final exam:

- Height of falling object: $h = -16t^2 + h_0$
- Voltage: $V = ir$
- Area of a parallelogram: $A = bh$
- Simple interest formula: $I = Prt$
- Compound interest formula: $B = P \left(1 + \frac{r}{n}\right)^{nt}$

- Midpoint of (x_1, y_1) and (x_2, y_2) : $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$

Extra Credit!

- If you write up the answers to all of the review exercises listed below, and hand them in at the test, you can earn up to 2% extra credit towards the test (depending on neatness and completeness)!
- Review exercises:
 - Chapter 8 (p.575) #1-15 odd, 18, 23, 27, 31
 - Chapter 9 (p.637) #11, 13, 17, 19-31 odd
 - All Chapters (p.525) #1, 3, 7-22 all
 - All Chapters (p.646) #1-5 odd, 15-31 odd, 35, 37, 47, 49

Vocabulary

A few problems on the test will be about vocabulary words you have learned. They'll be in the "fill-in-the-blank" style just like the notes. Here are the words you'll want to know for that part of the test:

integer (2.1)

absolute value (2.1)

additive inverse (2.2)

coefficient (3.2)

like terms (3.2)

polynomial (3.2)

prime factorization (3.5)

linear equation (4.2)

equivalent fractions (5.1)

improper fraction (5.1)

lowest terms (5.2)

rational expression (5.2)

circumference (5.3)

irrational number (6.4)

ratio (7.1)

probability (7.1)

unit ratio (7.1)

proportion (7.2)

percent (8.1)

x-intercept (9.3)

y-intercept (9.3)

And here are the possible sentences you'll see on the test (each of the above will fill in one blank below):

Two numbers that add to 0 are called _____.

A ratio representing some part out of 100 is called a _____.

A point where the graph intersects the x -axis is called an _____.

The _____ of a number is the distance from 0 to that number.

A comparison between two quantities using a quotient is called a _____.

A ratio in which the denominator is 1 is called a _____.

Monomials that have the same variables raised to the same exponents are called _____.

A monomial or a sum of monomials is called a _____.

A product written with prime factors only is called a _____.

An equation in which each variable term is a monomial of degree 1 is called a _____.

A point where the graph intersects the y -axis is called a _____.

A fraction where absolute value of numerator is bigger than or equal to the absolute value of denominator is called an _____.

The numbers $\dots, -3, -2, -1, 0, 1, 2, 3, \dots$ are called the _____.

A _____ is a number from 0 to 1 that represents the chances that something will happen.

The numerical factor in a monomial is called the _____.

When two fractions name the same number (ex: $\frac{1}{3}$, $\frac{2}{6}$, and $\frac{4}{12}$), we call them _____.

An equation in the form $\frac{a}{b} = \frac{c}{d}$ is called a _____.

A fraction is in _____ if the GCF of its numerator and denominator is 1.

A polynomial over a polynomial is called a _____.

The distance around a circle is called the _____.

A number where the decimal part does not terminate or repeat is called an _____.