

Homework Assignments

Math 138: Statistics Spring 11

All homework is due at 4:30 PM on the day indicated. I encourage you to discuss the homework problems with your classmates, evening math tutors, and me, even problems you're curious about but haven't been assigned.

On all problems, feel free to use technology whenever you think it would help. One of the skills I want you to learn is deciding when the use of technology will help you. The problems marked with an **M** have been chosen specifically to give you practice with Minitab, and I suggest you use it to complete these problems. Minitab is available on most public computers on campus. You may also use other statistical software packages such as DataDesk, MyStats, SPSS, etc. if you like. See the folks in the QUAD center for more information on these.

All problem numbers reference the 3rd edition of the text. Many problems appear in earlier editions under the same name.

Due Wednesday, January 19:

Read Chapters 1 through 3.

Chapter 2 Problems: 18 (Flowers), 20 (Vineyards), 25 (Horse Race 2008)

(Don't identify W's. Just name the variables, and classify each variable as categorical or quantitative.)

Chapter 3 Problems: 8 (Ratings again), 15 (Global warming), 30 (Twin births)

Due Friday, January 21:

Read Chapter 4.

Chapter 4 Problems: 6 (More shapes), 8 (Singers), 10 (Run Times), 42 (Return of the birds), 43 (Acid rain), 47 (Zip codes)

Due Monday, January 24:

Read Chapter 5.

Chapter 4 Problems: 26 (Golf drives), 30 (Cold weather), 48 (Zip codes revisited), 52M (Prisons)

Chapter 5 Problems: 12 (Camp sites), 18 (Fuel economy), 21 (Test scores)

Due Wednesday, January 26:

Read Chapter 6.

Chapter 6 Problems: 3abc (Payroll), 16 (MP3s), 24 (Rock concerts), 26 (IQ), 35 (Receivers), 40 (More IQs), 44 (Tires)

Due Friday, January 28:

Read Chapter 7.

Chapter 7 Problems: 4 (Association), 10 (Coffee sales), 12 (Matching), 23 (Correlation errors), 24 (More correlation errors), 26 (Cellular telephones and life expectancy), 34M (Drug abuse)

Due Monday, January 31:

Read Chapter 8.

Chapter 8 Problems: 16 (Roller coaster), 20 (Coasters again), 24 (Another ride), 28 (Last ride), 40 (Success in college), 54M (Candy 2006)

Due Wednesday, February 2:

Read Chapter 9.

Chapter 8 Problems: 21 (Misinterpretations), 22 (More misinterpretations)

Chapter 9 Problems: 6 (Bad Model?), 12ab (More unusual points), 16 (What's the effect?), 20 (Speed)

Due Friday, February 4:

Read Chapter 10.

Chapter 5 Problems: 39 (Assets again), 42 (Stereograms, revisited)

Chapter 10 Problems: 12 (Treasury bills), 18M (Planet distances and years 2006), 19M (Planet distances and order 2006), 20M (Planets 2006, part 3)

No homework due Monday, February 7. (Quiz #1 today!)

Due Wednesday, February 9:

Read Chapter 12.

Chapter 12 Problems: 6 (Gallup world), 8 (What did they do? Lycos), 12 (What did they do? State Police), 18 (Parent opinion, part 2), 35 (Sampling methods), 36 (More sampling methods)

Due Friday, February 11:

Read Chapter 13.

Chapter 13 Problems: 8 (What's the design? Vitamin B-12), 10 (What's the design? Insomnia), 12 (What's the design? Breast cancer), 30 (Swimsuits), 40 (Gas mileage), 44 (SAT prep)

No Homework due Monday, February 14.

Due Wednesday, February 16:

Read Chapter 11.

Chapter 11 Problems: 12 (More bad simulations), 32 (A bigger family), 36 (The World Series).

(Note: problems 32 and 36 ask for an empirical probability, not a theoretical probability. You must run some simulations.)

Chapter 14 Problems: 4 (Rain), 8 (Crash)

Due Friday, February 18:

Read Chapter 14.

Chapter 14 Problems: 12 (Scratch off), 20 (Stats projects), 22 (Another project), 24 (Final project), 34 (Disjoint or independent?), 42 (Pepsi)

Due Monday, February 21:

Read Chapter 15.

Chapter 15 Problems: 2 (Travel), 8 (Pets), 18 (Shirts), 22 (On the road again), 24 (Pets, again), 34 (Graduation), 36 (Graduation, part II)

Due Wednesday, February 23:

Read the first 5 pages of Chapter 16.

Chapter 15 Problem: 46 (Polygraphs)

Chapter 16 Problems: 4 (You bet!), 12 (The die), 16 (Red lights), 24 (Kittens)

Due Friday, February 25:

Read the rest of Chapter 16 and the first 8 pages of Chapter 17.

Chapter 16 Problems: 32 (Stop!), 36 (Casino) (replace 1000 with 10 million in part (c)), 38abc (Pets)

Chapter 17 Problems: 2 (Bernoulli 2)

No Homework due Monday, February 28 (Quiz #2 today!)**Due Wednesday, March 2:**

Read about the Normal model in Chapter 17.

Chapter 17 Problems: 20 (Arrows), 22 (More arrows), 24 (Still more arrows), 30 (More arrows), 48 (New bow, again)

Due Friday, March 4:

Read the first 8 pages of Chapter 18.

Chapter 18 Problems: 6ab (M&M's), 8 (Bigger bag), 10 (Too many green ones?), 12 (Smoking), 22 (Seeds), 24 (Genetic defect)

Due Monday, March 7:

Read the rest of Chapter 18.

Chapter 18 Problems: 30 (CEO compensation), 34 (Home values), 48ad (Potato chips), 50ac (Groceries), 52 (More groceries)

Due Wednesday, March 9:

Read Chapter 19.

Chapter 19 Problems: 10 (Parole), 12 (Contaminated chicken, second course), 20 (Local news), 22 (Gambling), 24 (Pregnancy)

Due Friday, March 11:

Chapter 19 Problems: 2 (Margin of error), 5 (Conclusions), 8 (Confidence intervals, again), 18 (Junk mail), 28 (Pregnancy II)

Due Monday, March 14:

Read Chapter 20.

Chapter 20 Problems: 22 (Football 2006), 24 (Seeds), 26 (Jury), 28 (Acid rain)

Due Wednesday, March 16:

Read Chapter 21.

Chapter 20 Problems: 1 (Hypotheses), 2 (More hypotheses), 4 (Dice), 5 (Relief), 6 (Cars), 10 (Got milk?)

Chapter 21 Problems: 6 (Alpha, again)

Due Friday, March 18:

Chapter 20 Problems: 30M (TV ads)

Chapter 21 Problems: 2 (Which alternative?), 12M (Superdads), 20 (Alzheimer's), 22 (Quality control), 26 (Stop signs)

No Class Monday, March 28!

Due Wednesday, March 30:

Read Chapter 23.

Chapter 23 Problems: 3 (t -models, part III), 4 (t -models, part IV), 10 (Crawling), 14 (Parking), 30 (Fuel economy), 36M (Yogurt)

Due Friday, April 1:

Read Chapter 22.

Chapter 22 Problems: 2 (Science news), 6 (Regulating access), 8 (Buy it again?), 12 (Carpal tunnel), 14 (Anorexia), 16 (Anorexia again)

Due Monday, April 4:

Chapter 22 Problems: 4 (Origins), 22 (Birth weight), 24 (Shopping), 28M (Gender gap)

No Homework due Wednesday, April 6 (Quiz #3 Today!)

Due Friday, April 8:

Read Chapter 24 through "A Two-Sample t -Test for the Difference Between Two Means."

Chapter 24 Problems: 4 (Washers), 16 (Streams), 21 (Job satisfaction), 24 (Ad campaign), 28 (Thirsty), 32M (Swimming heats)

Due Monday, April 11:

Read Chapter 25.

Chapter 25 Problems: 2 (MTV), 6 (Rain / Cloud seeding), 8 (Friday the 13th, accidents), 22abM (Gasoline), 30 (Marathon startup years 2009)

Due Wednesday, April 13:

Read Chapter 27 through "Confidence Intervals for Predicted Values."

Chapter 27 Problems: 8 (Cholesterol 2007), 12 (Cholesterol, finis), 18 (SAT scores), 20 (SATs, part II), 22 (SATs, again), 34M (Crawling)

No Homework Due Friday, April 15.

Due Monday, April 18:

Read Chapter 26.

Chapter 26 Problems: 1 (Which test?), 2 (Which test, again?), 4 (M&M's), 28 (Cars), 34M (Full moon), 36M (Full moon, next phase)

No Class Wednesday, April 20 (SSRD today!)

Due Friday, April 22:

Read Chapter 28.

Chapter 28 Problems: 4 (Darts), 6 (Frisbee throws), 8 (Zip codes, revisited), 10 (Wines, revisited), 18 (Fertilizers), 22M (Analgesics)

No homework due Monday, April 25.

Bring your project data to work on in class today.

No homework due Wednesday, April 27.

Bring your project data to work on in class today.

No homework due Friday, April 29.

Bring your finished poster to the math hearth and set it up for display there. Be ready with your poster by the beginning of class!

No homework due Monday, May 2.

Bring questions to ask to review for the final. Final project papers due today.

Final Exam Tuesday May 10 or Wednesday May 11, 8:00–11:00