

Remote Assessments

Tests and Quizzes in a Virtual Learning Environment

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1. Respondus

2. Canvas Quizzes



Dashboard

Published Courses (3)

Caveats before I start:

- I don't claim to be an expert or even an advocate of these.
- Test everything yourself. Once you find a setup you like, stick to that.
- These services are updated often; things might work differently from how I remember.
- Things might work differently from the documentation you find online.

Respondus Lockdown Browser & Respondus Webcam Monitor

- Respondus Lockdown Browser prevents students from doing anything on their computers outside of the quiz environment.
- (Can't access websites, instant messaging, ...)
- Webcam Monitor also records the students using their Webcam. Can be reviewed later by instructor.
- In my experience, it mostly serves as a deterrent.
- Not clear (to Chris) if we are allowed to require these services.

Respondus Settings I used in Math 2A

▼ Sample Resp

LockDown Browser Settings

☐ Don't require Respondus LockDown Browser for this exam

☒ Require Respondus LockDown Browser for this exam

☒ Require LockDown Browser to view feedback and results

Password Settings

Access code for this exam (optional)

Advanced Settings

☐ Lock students into the browser until exam is completed [\[explain\]](#)

☒ Allow students to take this exam with an iPad (using the "LockDown Browser" app from the App Store) [\[explain\]](#)

☐ Allow access to specific external web domains [\[explain\]](#)

☒ Enable Calculator on the toolbar [\[explain\]](#)

☐ Standard Calculator

☒ Scientific Calculator

☐ Enable Printing from the toolbar [\[explain\]](#)

Monitor Webcam Settings

☐ Don't require Respondus Monitor for this exam

☒ Require Respondus Monitor for this exam

☐ Either Respondus Monitor or a proctored lab can be used to take this exam

Startup Sequence

☐ Don't require Respondus Monitor for this exam

☒ Require Respondus Monitor for this exam

☐ Either Respondus Monitor or a proctored lab can be used to take this exam

[Need Help?](#)

Startup Sequence

The Startup Sequence is the set of optional events that occur before a Monitor webcam session begins. You can choose the items to be included in the Startup Sequence, and can edit the text unless it has been locked by the administrator.

<input checked="" type="checkbox"/> Webcam Check Preview
<input checked="" type="checkbox"/> Additional Instructions Preview Edit Text
<input checked="" type="checkbox"/> Guidelines + Tips Preview
<input checked="" type="checkbox"/> Student Photo Preview
<input checked="" type="checkbox"/> Show ID Preview Edit Text
<input checked="" type="checkbox"/> Environment Check Preview Edit Text
<input type="checkbox"/> Facial Detection Check Preview

Facial Detection Options

☐ Prevent students from starting the exam if face cannot be detected during Startup Sequence. [\[explain\]](#)

☐ Notify students during the exam if face cannot be detected (prompt for a fix) [\[explain\]](#)

Advanced Settings

☐ Allow another application to use the microphone during this exam. [\[explain\]](#)

☐ Make webcam videos additionally available for viewing on mobile devices (allow 24 hours).

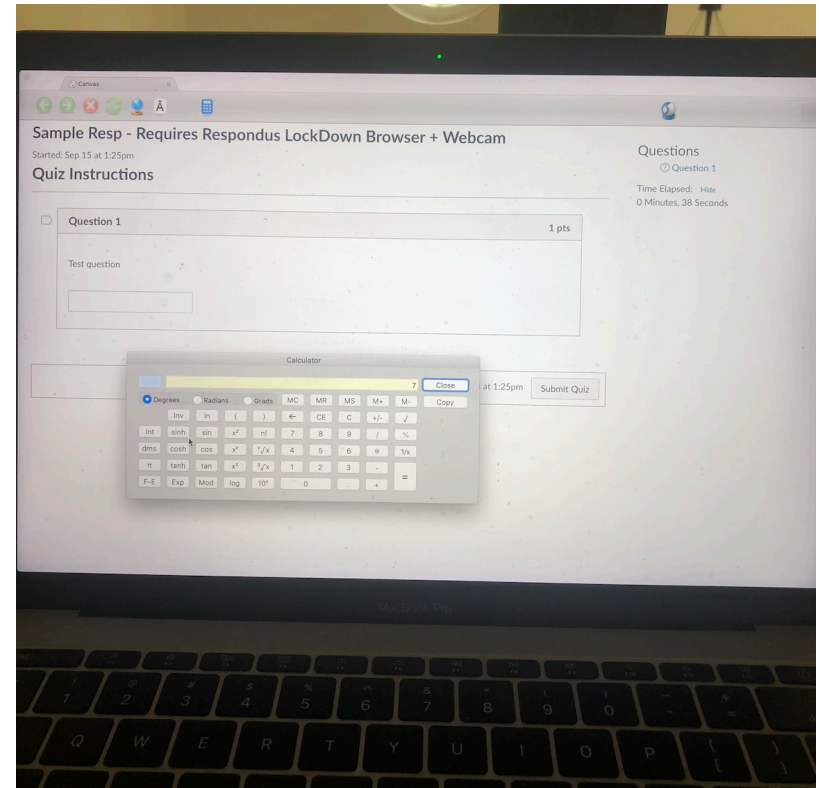
Enter a demo student username for use by the instructor: [\[explain\]](#)

[Save + Close](#) [Cancel](#)

- See also advice from Rachel Lehman and others on https://www.math.uci.edu/~remote_teaching/

Respondus Lockdown Browser & Respondus Webcam Monitor

- Difficult to test Respondus as the instructor. (Preview causes my computer to crash. Use Student View.)
- You can incorporate a simple built-in calculator, but the students don't like it.
- The students can't upload anything while in the Respondus environment.

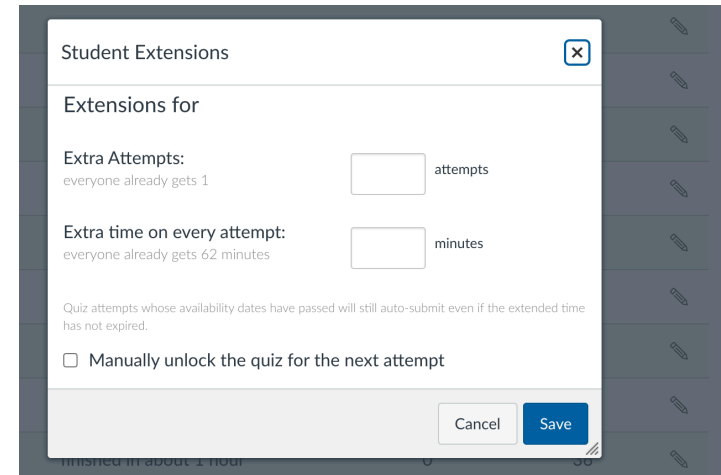


Respondus Warnings

- It's another piece of technology the students need to download.
- Don't for example have a pdf-download within the Respondus test.
- My fault: A few times images did not show up in Respondus.
- The students can't upload anything while in the Respondus environment.

Canvas Quizzes

- Have nothing to do with “quizzes” in particular; could be midterms or exams or ungraded surveys or ...
- Easy to import and export.
- No way to duplicate that I know of other than by import-export.
- Pretty easy to customize: give a student extra time, alternate due dates, etc. Once published, go to “Moderate this quiz”.



A screenshot of the 'Student Extensions' dialog box in Canvas. The dialog has a title bar with a close button. It contains two input fields: 'Extra Attempts' with a value of 1 and 'Extra time on every attempt' with a value of 62 minutes. Below these is a checkbox for 'Manually unlock the quiz for the next attempt' which is unchecked. At the bottom are 'Cancel' and 'Save' buttons. A small note at the bottom of the dialog states: 'Quiz attempts whose availability dates have passed will still auto-submit even if the extended time has not expired.'

Student Extensions

Extensions for

Extra Attempts:
everyone already gets 1 attempts

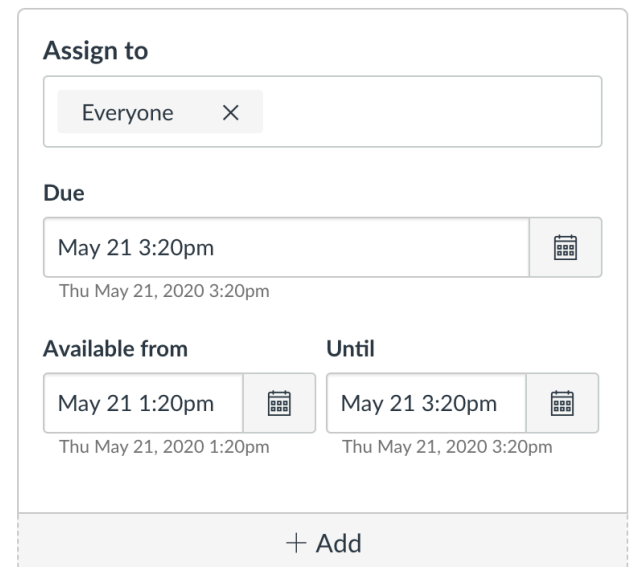
Extra time on every attempt:
everyone already gets 62 minutes minutes

Quiz attempts whose availability dates have passed will still auto-submit even if the extended time has not expired.

☐ Manually unlock the quiz for the next attempt

Cancel Save

Assign



A screenshot of the 'Assign to' dialog box in Canvas. It shows a selection of 'Everyone' with a close button. Below is a 'Due' date field set to 'May 21 3:20pm' with a calendar icon. Underneath the due date is the text 'Thu May 21, 2020 3:20pm'. There are two date/time fields: 'Available from' set to 'May 21 1:20pm' and 'Until' set to 'May 21 3:20pm', both with calendar icons. Below these are the full dates: 'Thu May 21, 2020 1:20pm' and 'Thu May 21, 2020 3:20pm'. At the bottom is a '+ Add' button.

Assign to

Everyone X

Due

May 21 3:20pm

Thu May 21, 2020 3:20pm

Available from

May 21 1:20pm

Thu May 21, 2020 1:20pm

Until

May 21 3:20pm

Thu May 21, 2020 3:20pm

+ Add

Many different question types

- Can be auto-graded: True-False, Multiple Choice, Numeric Answer, Matching
- Or you can grade them: Fill in the blank, free response, file upload (if you're not using Respondus)
- I've only used a handful of the question types. Let me know if you have a favorite type I didn't mention.
- By default, 0 seems to always be a correct numeric answer unless you delete it.

Files

Respondus Lock-down Browser

Quizzes

Zoom

YuJa 2.0

Announcements

Discussions

People

Syllabus

Outcomes

Modules

Conferences

Collaborations

Rubrics

Settings

Question Numerical Answer pts: 1

Define the correct answer as any number within a range, or a number plus or minus some error margin. Student will be given an empty text box to type their numerical answer.

Question:

HTML Editor

0 words

Answers:

Exact Answer: 0 with error margin 0

...

Exact Answer: 0 with error margin 0

...

Exact Answer: 0 with error margin 0

...

Exact Answer: 0 with error margin 0

...

+ Add Another Answer

Cancel Update Question

LaTeX in Canvas quizzes

- Not bad, no keyboard shortcut for accessing it as far as I know.
- The math produced is an image file which can be re-sized and edited or copy-pasted without much trouble.
- I never like the spacing after it... I often force a space inside the LaTeX code, like `\sin(x)\;`

[Switch View to Basic](#)

$$R \xrightarrow{\varphi} S$$

Insert Equation

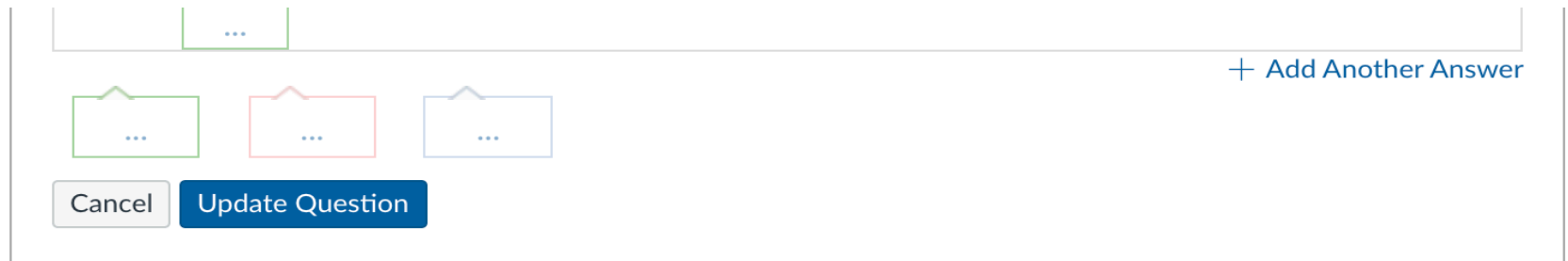
Warnings

- Images, pdfs, etc you upload on a quiz are visible to the students by default in the Files section.
- Students see their score with 0 for all the non-auto-graded questions
- Comments do not save, scores do not update, unless you tell them to update.

	CourseLearningObjectives.pdf	Sep 24, 2017	Sep 24, 2017	82 KB	
	Quiz Files	Aug 8, 2020		--	
	SampleMidterm2-Solutions.pdf	Aug 26, 2020	Aug 26, 2020	Christopher J Da... 467 KB	
	Unit1-LearningObjectives.pdf	Sep 24, 2017	Sep 24, 2017	103 KB	
	Unit2-LearningObjectives.pdf	Sep 24, 2017	Sep 24, 2017	112 KB	

Warnings 2

- I usually wind up frustrated with the “Question Bank” feature.
- Be sure to save the question before saving the quiz.
- If you have multiple versions, the “Preview” will only show you one version.



A screenshot of a question editor interface. At the top, there is a text input field with a green border and three dots inside. To the right of this field is a blue link that says "+ Add Another Answer". Below the text field, there are three colored boxes: a green one with three dots, a red one with three dots, and a blue one with three dots. At the bottom left of this section are two buttons: a light gray "Cancel" button and a dark blue "Update Question" button.

+ New Question

+ New Question Group

🔍 Find Questions

☐ Notify users this quiz has changed

Cancel

Save & Publish

Save

Favorite feature: Question groups

- Easy to make multiple automated versions of the exam.
- Easy to rearrange.
- Suggestion: Use many question groups, where the questions within a group are similar.
- Suggestion: Use language/phrasings the students have seen before.
- Suggestion: Have a statement about academic integrity and copied answers at the beginning of the exam.

Matlab short questions A

Pick questions, pts per question

Cancel

Update Group

⋮ Question

Describe in your own words what the following line does in Matlab:
`v(2:2:end) = []`

⋮ Question

Describe in your own words what the following line does in Matlab:
`v(2:2:end) = []`

Take-Home Exams

General Setup

- Largely unproctored exams
- Questions are made available at specified time (via email or Canvas)
- Questions are uploaded to Canvas (or Gradescope) via assignment

Tips

- Have students practice scanning/uploading documents
- Students upload a single .pdf of their results
- Students should check their submissions
- Give students a copy of blank “response sheet” before the test starts

Utility of Response Sheets

Standardizes formatting for test responses

MATH 13 - INTRODUCTION TO ABSTRACT ALGEBRA FINAL EXAMINATION - ANSWER SUBMISSION SHEET

INSTRUCTIONS: Please print this sheet before taking the test. You will put your answers on these pages. At the end of the exam, scan these pages and upload them to Canvas. It is wise to print these on individual sheets of paper (i.e., not double sided).

Reminder: You are expected to follow the usual academic integrity rules for the taking examinations. In particular, the following rules are in place:

- You are free to consult your handwritten notes and “slides” from video lectures.
- You are *not* to access any online resources. Any solutions that look too similar to potential solutions online will be given zero points. Use of any online calculators (or handheld calculators) is also not allowed.
- You are not to work with anyone else during the exam. The work you show on the exam should be your own.
- No calculators should be used. Rather, you should show all mathematical work on your exam (except where otherwise noted).
- Any hint or indication of breaking the above rules will result in a decreased score (with either a 0 given to a problem or the entire exam).

Please sign the below: I have read the above and understand the consequences of not following these rules.

Signature: _____

UCI ID: Please place your UCI ID below (face up) when you scan this page. Your name, picture, and UCI ID number should be legible.

Question 1.

(a)

(b)

(c)

(d)

At-Home Exam

Take Home vs. At-Home Exam?

- At-Home Exam has some added layer of proctoring
- Useful when questions aren't easily adapted to Multiple Choice

Considerations for At-Home Exams

- Will there be a single time slot to take the test?
- Will students need printers?
- Will students need additional time to upload their submissions?

At-Home Exams: Zoom Proctoring

Zoom Proctoring

- Advantage: No-record proctoring
- Advantage: Can make announcement during test (e.g., two mins left)
- Advantage: Can answer questions via chat in real-time (e.g, Do I need to simplify my answer for #2?)
- Disadvantage: Difficult to monitor large groups of students
- Disadvantage: No lock-down browser capabilities

Tips

- Must be done during scheduled lecture or TA discussion time
- Require students to turn on cameras, off sound, and off virtual background
- Have TAs available to check student faces to picture roster

At-Home Exams: Respondus Proctoring

Idea: Use Respondus to proctor written test

- Advantage: Recorded monitoring & lockdown browser
- Advantage: Flexible timing – all students take at same time, or students take over several hours
- Disadvantage: Complicated Set-up

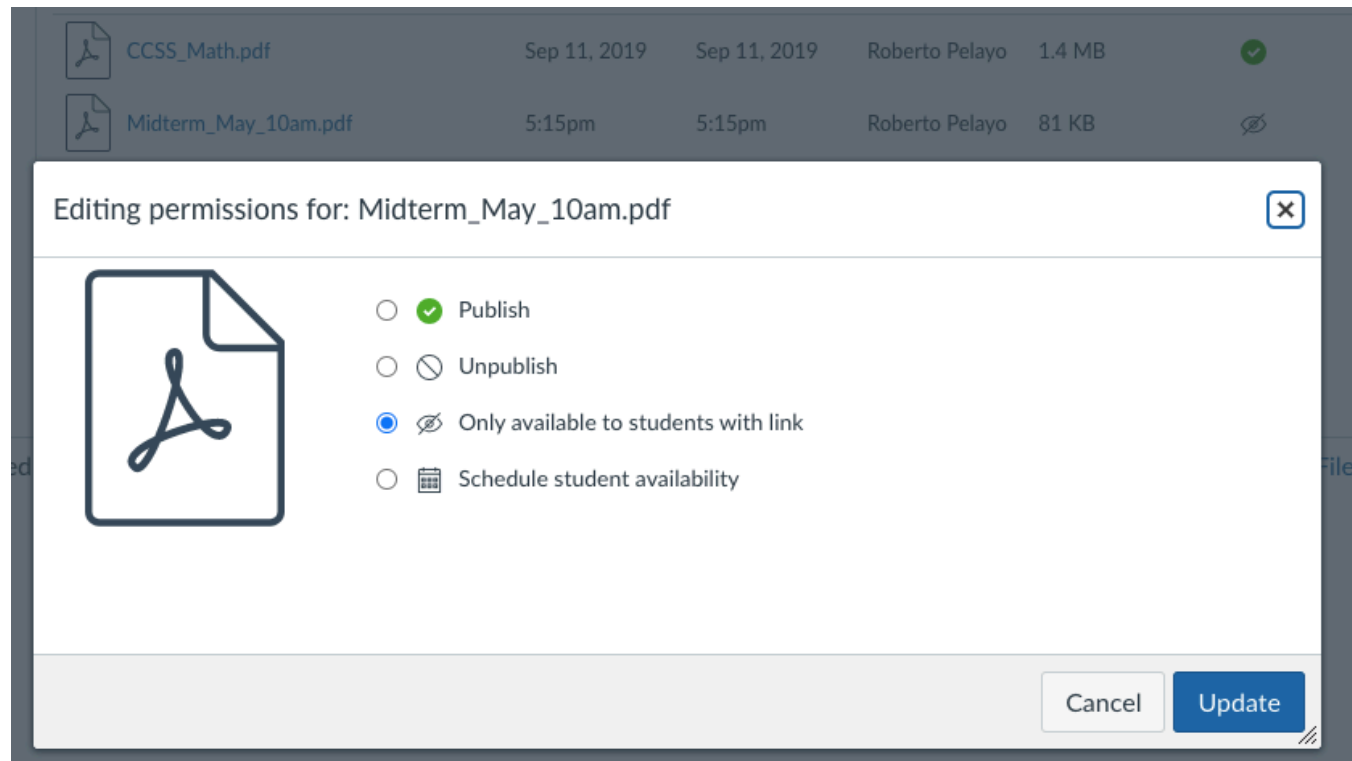
At-Home with Respondus: Setup

Need 3 main components:

- Upload the test to "Files"
- Build an Assignment to upload the finished test
- Build a Quiz with 1 question
 - Respondus can only be attached to a quiz

At-Home with Respondus: Uploading File

Make sure that visibility is set to “Only available to students with link”



At-Home with Respondus: Assignment

Create an Assignment to Receive Upload of Completed Test

Submission Type

Online

Online Entry Options

☐ Text Entry

☐ Website URL

☐ Media Recordings

☒ File Uploads

☒ Restrict Upload File Types

pdf

Enter a list of accepted extensions, for example: doc,xls,bxt

Assign to

Everyone

Due

Sep 16 12:10pm

Wed Sep 16, 2020 12:10pm

Available from

Sep 16 11am

Wed Sep 16, 2020 11:00am

Until

Sep 16 12:30pm

Wed Sep 16, 2020 12:30pm

+ Add

Test Time: Starts at 11am; ends at 11:50am; scan/upload by 12:10pm

At-Home with Respondus: Quiz

Quiz settings (this is what Respondus is attached to)

Midterm Example - Requires Respondus LockDown Browser + Webcam

Quiz Instructions:

HTML Editor

B I U A A Ix [bulleted list] [numbered list] [checkbox list] x² x₂ [unordered list] [ordered list]

[table] [link] [unlink] [image] [sqrt] [undo] [redo] [color picker] [text color] [background color] [bold] [italic] 12pt Paragraph [icon]

This is your Midterm. When you start the test, you will be able to view the .pdf of the test. Write your answers to the exam on your own paper, then scan it at the end.

This is a 50 minute test with 20 mins to scan/upload your exam as a single .pdf

Test available: 11:00am


Test done by: 11:50pm

Scans uploaded by 12:10pm


Upload your scan to this assignment: [Midterm Upload](#)

Assign

Assign to


Everyone 

Due

Sep 16 11:50am 


Wed Sep 16, 2020 11:50am

Available from

Sep 16 11am 

Wed Sep 16, 2020 11:00am

Until

Sep 16 12:30pm 

Wed Sep 16, 2020 12:30pm

+ Add

At-Home with Respondus: Quiz

The Setup:


Details

Questions

Mastery Paths

☒ Show Question Details

⋮ Question

Click here for copy of the exam:
[Midterm_May_10am.pdf](#) 

⋮ Question

1 pts

I did took this test honestly without any prohibited aids or resources

er

☐ True

☐ False

What Students See:

Click here for copy of the exam:

[Midterm_May_10am.pdf](#)

[Minimize File Preview](#)

Page < 2 > of 2 ↺ — ZOOM + ↗

Math 13 - Spring 2020 Midterm (10 am) - Page 2 of 2 May 6, 2020

1. The following statements are false. For each of the below, provide a reason why the statement is false or a counterexample and verify it is indeed a counterexample.

- (a) There exists a unique $x \in \mathbb{Z}$ such that $3x \equiv 1 \pmod{5}$.
- (b) There exists a unique $x \in \mathbb{Z}$ and a unique $y \in \mathbb{Z}$ such that $7x + 3y = 1$.
- (c) For all non-zero $a, b \in \mathbb{Z}$, if $a \mid b$, then $a \leq b$.
- (d) For all $x, y \in \mathbb{R}$, $|x + y| = |x| + |y|$.
- (e) For all $a, b \in \mathbb{Z}$, $a \equiv b \pmod{9}$ if and only if $a^2 \equiv b^2 \pmod{9}$.

2. For any positive real numbers $x, y \in \mathbb{R}$, $\frac{x}{y} + \frac{y}{x} \geq 2$.

3. Let $a, b, c, d \in \mathbb{R}$. Then $(ab + cd)^2 \leq (a^2 + c^2)(b^2 + d^2)$.

4. In what follows, let $a, b, c \in \mathbb{Z}$ be non-zero integers.

- (a) Consider the following statement: "If $a \mid c$ and $b \mid c$, then $ab \mid c$." Show that this statement is false by providing a counterexample.
- (b) If we add that a and b are relatively prime, then our statement becomes true. Show this by proving the following:
Theorem. Let $\gcd(a, b) = 1$ with $a \mid c$ and $b \mid c$. Then $ab \mid c$.

5. Let $a, x \in \mathbb{Z}$. In this question, we will consider solutions to the modular equation $ax \equiv 1 \pmod{10}$.

- (a) For the below, does there exist a solution $x \in \mathbb{Z}$ to the modular equation? If there does exist a solution $x \in \mathbb{Z}$, write that equation on your sheet, along with a solution for that equation. If a solution does not exist, then do not write that equation on your sheet.
 - $2x \equiv 1 \pmod{10}$
 - $3x \equiv 1 \pmod{10}$
 - $4x \equiv 1 \pmod{10}$
 - $5x \equiv 1 \pmod{10}$
 - $6x \equiv 1 \pmod{10}$

Concluding Thoughts

- Make clear the expectations to students (frequent emails)
- Give students the opportunity to practice
 - Practice with uploading a dummy assignment
 - Practice with Respondus before high-stakes tests
- Consider giving "response sheets" early
- Tell students to *not panic* if there is a tech problem...we will fix it!