Fall Semester 2020 Assessment Instructions

General Education Competencies:

This year, we will complete a Visual Communication assessment and a Teamwork assessment.

All courses in the core curriculum must assess the general education competencies by completing the Visual Communication and the Teamwork assessments. The courses in the core curriculum are ASTR 1303, 1304, 1403 & 1404 along with PHYS 1401, 1402, 1405, 1407, 2425 & 2426, i.e., all ASTR & PHYS with the exceptions of PHYS 1410 and all ENGR courses.

TEAMWORK ASSESSMENT:

Physics and Astronomy courses
We will apply the Teamwork assessment. The Teamwork assessment will be deployed on Blackboard by each faculty member. Instructions on deploying the assessment are found on page fourteen through twenty-two of this document. You will need to download the attached document titled 'Teamwork Assessment' to be able to deploy the assessment.

NOTE: Please see the instructions and rubrics for the Teamwork Communication assessment on page fourteen of this document.

VISUAL COMMUNICATION ASSESSMENT:

Physics and Astronomy Lab courses
We will also apply the new Visual Communication to a graph from a lab. These classes will also report additional data (final letter grades, HW scores and/or attendance) as has been done in the past.

NOTE: Please see the instructions and rubrics for the Visual Communication assessment on the following pages. The Visual Communication rubrics are found on pages three and four of this document. Examples of each component for each part of the Visual Communication assessment are found on pages five through thirteen.

Reporting of Visual Communication Results:

Please copy the spreadsheet template and enter the scores from the students into the rows under the appropriate column of the spreadsheet for the assessment being run. Please submit one spreadsheet per section taught. You do not need to put your name anywhere in the sheet, but the title of the document should indicate whether the data are for **ASTR 1403 & 1404, PHYS 1401, 1402, 1405, 1407, 2425 & 2426.**

Please title each assessment as shown below.

Instructor Last Name Course Abbreviation Course Number-Synonym-Section F20".
Example: ARELLANO PHYS 1405-09682-010 F20

When you have filled out the spreadsheet, please send it to June Mullin (jmullin@austincc.edu). Again, you do not need to put your name anywhere in the sheet, but the title of the document must indicate which class the data is from.

ASTR 1403 & 1404, PHYS 1401, 1402, 1405, 1407, 2425 & 2426

The LAB courses: **ASTR 1403 & 1404, PHYS 1401, 1402, 1405, 1407, 2425 & 2426** will apply the Visual Communication assessment to a graph from a lab report. For ASTR 1403 & 1404 and PHYS 1405 & 1407, the lab maybe a group lab report - but you must report the results for each individual student (even if they are the same for all members of the lab group).

Visual Communication Assessment

1) **Axis Titles (==Examples of each type are found on pages 5 and 6==)**

Points Earned	Description of component for Axis Titles
0pts	Both axes are unlabeled with no units
1pt	There are labels or units on the axes, but the labels and units are incorrect
2pts	One axis is correctly labeled, but missing or incorrect units
3pts	Both axes are correctly labeled, but missing or incorrect units
4pts	Both axes are correctly labeled, but only one axes has correct units or both axes are labeled, and axes have correct units, but axes labels are inverted
5pts	Everything is correct

2) **Data points and trendline (==Examples of each type are found on pages 7 through 9==)**

Points Earned	Description of component for Data points and trendline
0pts	Incorrect style of graph or graph with lines but not visible data points
1pt	Identifiable data points only
2pts	Identifiable and correct data points only
3pts	Data points with a trendline, but either trendline is not correct or data includes erroneous data points
4pts	Data points with trendline, but missing or incorrect equation of trendline
5pts	Everything is correct

3) **Graph Title (==Examples of each type are found on pages 10 and 11==)**

Points Earned	Description of component for Graph Title
0pts	No title
1pt	Incorrectly titled
2pt	Title is not wrong, but does not appropriately communicate the lab concept
3pts	Correctly titled

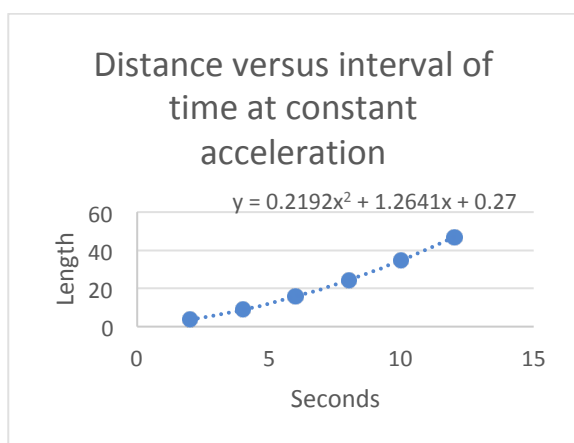4) **Formatting (<mark>Examples of each type are found on pages 12 and 13</mark>)**

Points Earned	Description of component for Formatting
0pts	Disorganized or chaotic or illegible or not easy to read
1pt	Not scaled appropriately with data or data set is not distinguishable
2pts	Everything is correct

Distance versus interval of time at constant acceleration

$y = 0.2192x^2 + 1.2641x + 0.27$

0 points

No labels on either axis (shown)

Distance versus interval of time at constant acceleration

$y = 0.2192x^2 + 1.2641x + 0.27$

Length

Seconds

1 point

Labels, but labels do not correctly define quantity (shown)

Another example is using units as the title of each axis, as shown on the x-axis of this example graph

Distance versus interval of time at constant acceleration

$y = 0.2192x^2 + 1.2641x + 0.27$

Distance

Seconds
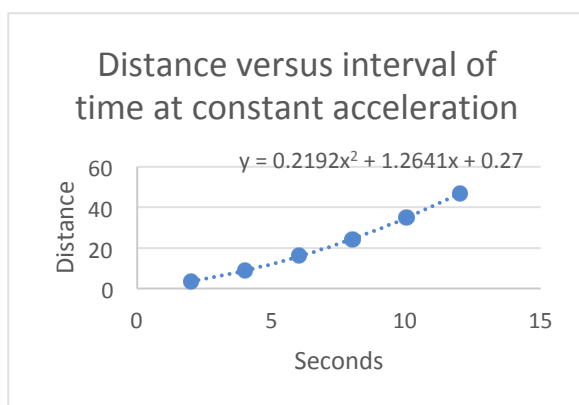
2 points

One axis has the correct label for the quantity it represents, but is missing units and the other axis information is incorrect or missing (shown)
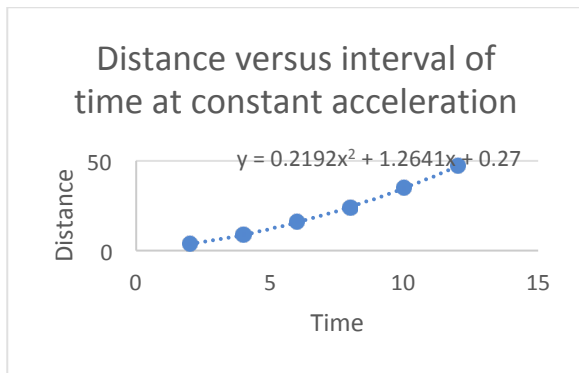
Distance versus interval of time at constant acceleration

$y = 0.2192x^2 + 1.2641x + 0.27$

3 points

Each axis has the correct label for the quantity it represents, but is missing units (shown)

Distance versus interval of time at constant acceleration

$y = 0.2192x^2 + 1.2641x + 0.27$
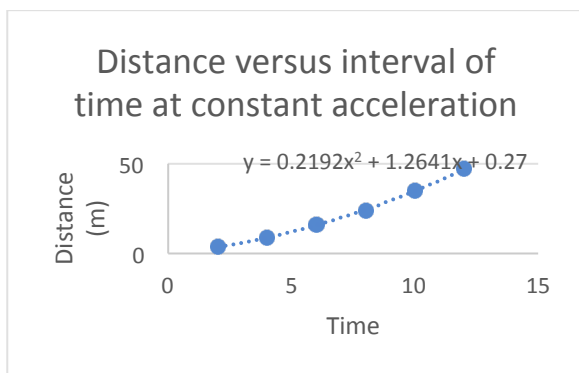
4 points

Each axis has the correct label for the quantity it represents, but one axis is missing units (shown)

The other option is axes are correctly labeled and have the correct units, but the labels and units are on the wrong axes.

Distance versus interval of time at constant acceleration

$y = 0.2192x^2 + 1.2641x + 0.27$
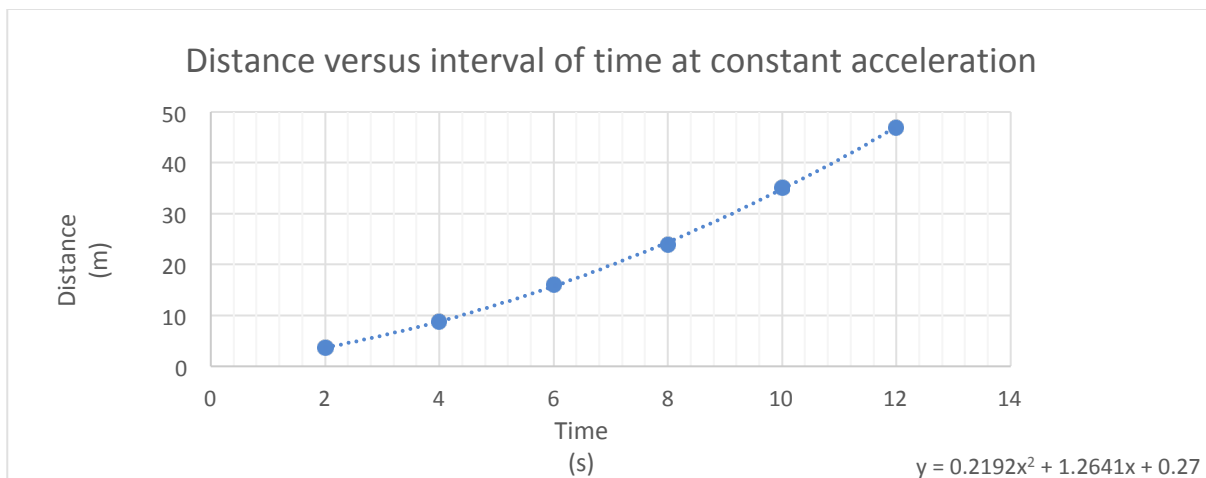
5 points

Each axis has the correct label for the quantity it represents, but is missing units (shown)

Distance versus interval of time at constant acceleration

(Distance (m) vs Time (s) graph)
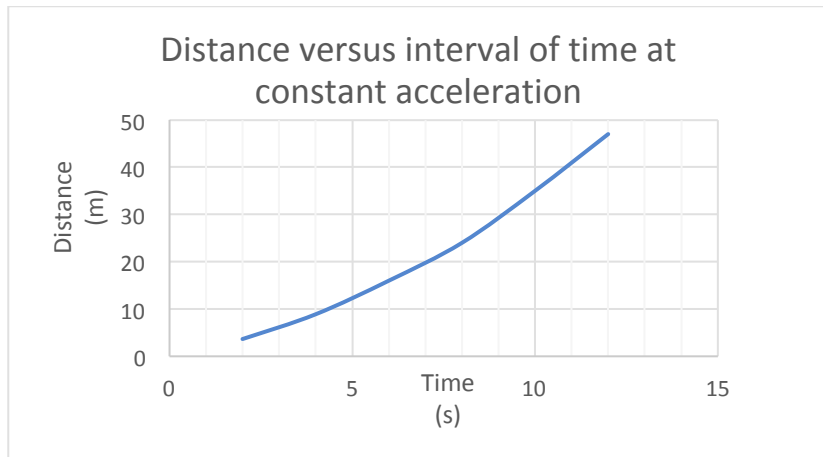
0 points

A line graph is used instead of plotting the data and fitting a trendline. Also, data points are not visible (shown)

It could also be the graphs is a bar graph instead of a required linear, or non-linear, trendline

Distance versus interval of time at constant acceleration

(Distance (m) vs Time (s) graph)
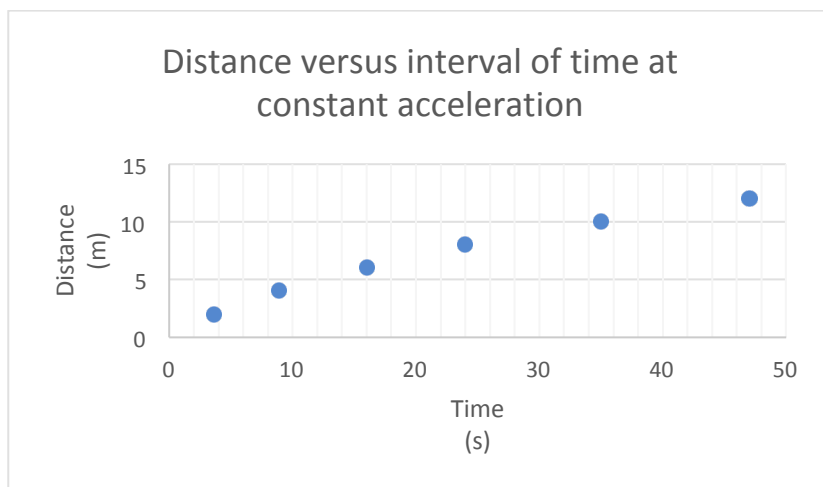
1 point

Data points are identifiable, but it is apparent that the data points are inverted. Also, a trendline is not provided (shown)

Other cases are where graphed data is not converted to correct units prior to being plotted, or point is an erroneous point such as a student typing 0.3 instead of 3.0

Distance versus interval of time at constant acceleration
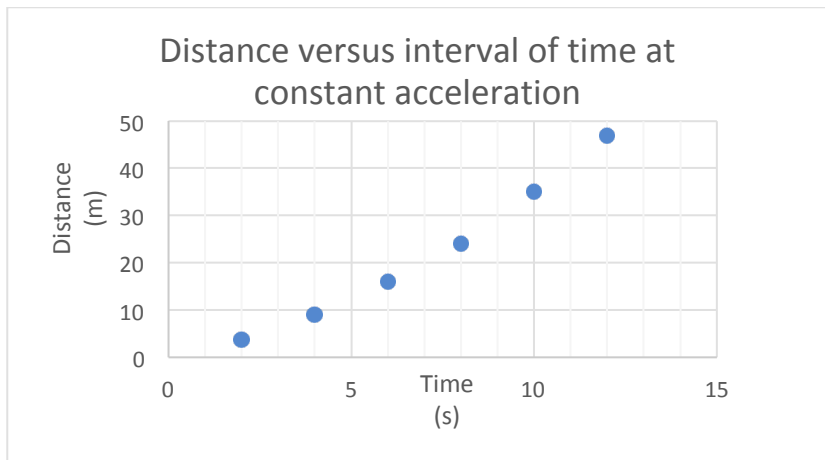
2 points

Data points are identifiable and correct, but a trendline is not provided (shown)

Another case is data points are identifiable and correct, but an incorrect trendline is provided

Distance versus interval of time at constant acceleration

y = 4.3329x - 7.9133
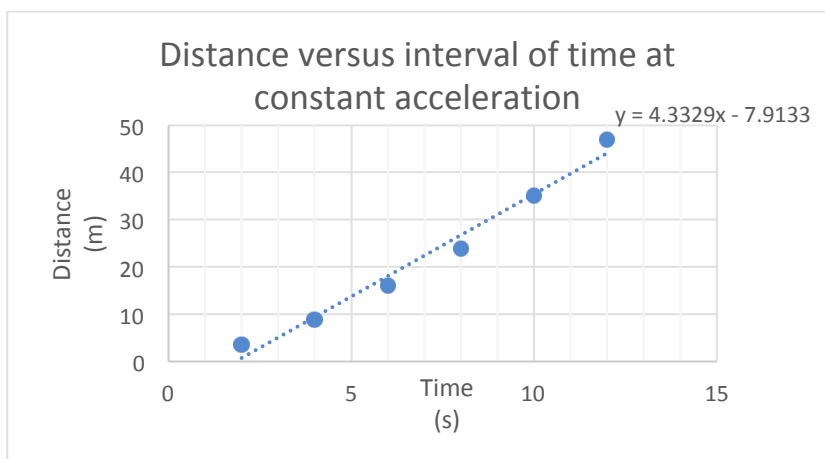
3 points

Data points are identifiable and correct, but the trendline is incorrect (shown)

Another case is data points are identifiable and trendline is correct for the data points that are plotted, but one or more data points are erroneous (e.g. A student types 0.3 instead of 3.0 for one of the points)
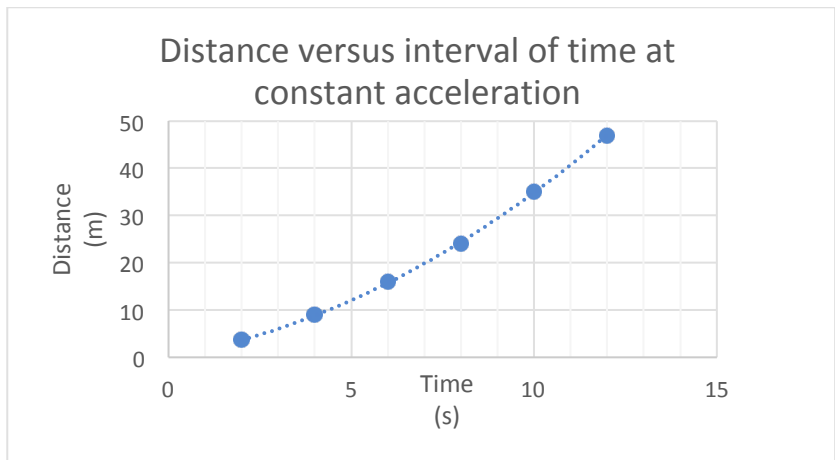
4 points

Data points are identifiable and correct and trendline is correct and provided, but equation of trendline is not provided (shown)

Another case is the equation of the trendline is incorrect. Perhaps the student was able to fit a power function trendline and the power function trendline fit the data and provided a power function as the trendline, but the correct equation was a polynomial because the way the experimental was conducted

$$y = 0.2192x^2 + 1.2641x + 0.27$$
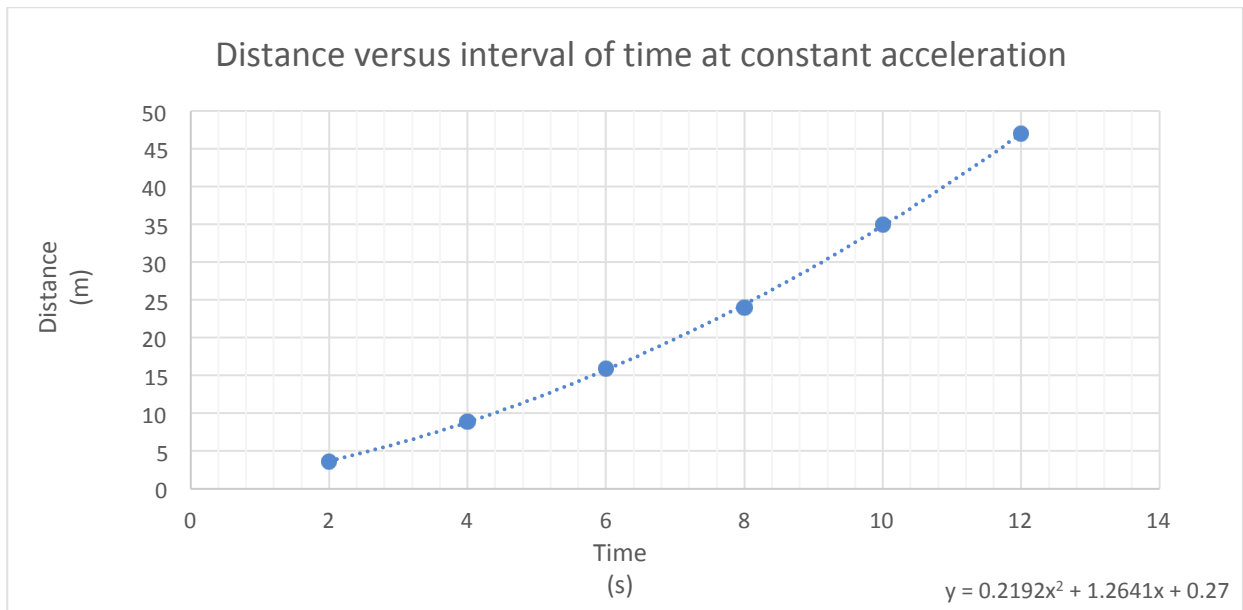
5 points

Data points are identifiable and correct, trendline is correct and provided, and equation of trendline is provide (shown)

$$y = 0.2192x^2 + 1.2641x + 0.27$$

0 points

No title (shown)

Velocity versus interval of time at constant acceleration

$$y = 0.2192x^2 + 1.2641x + 0.27$$
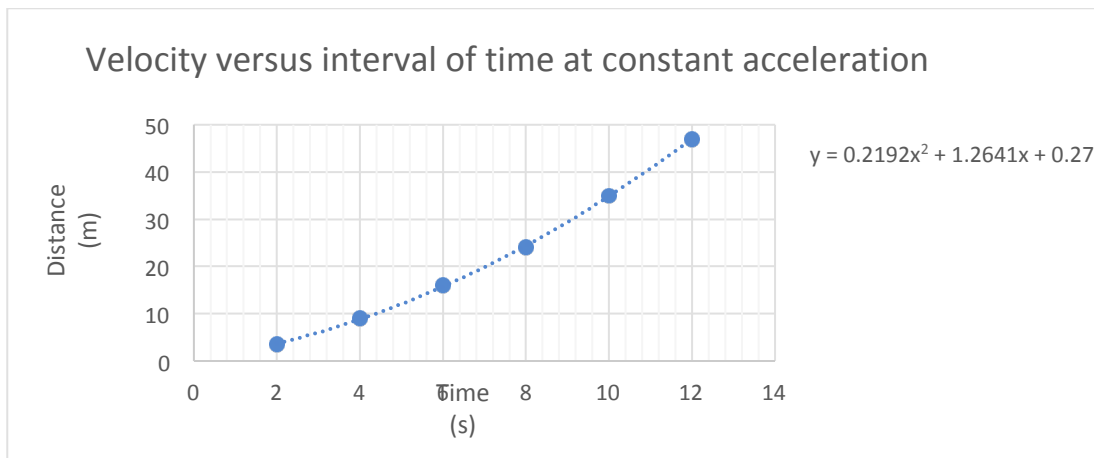
1 point

Title is provided, but it is an incorrect title for the graph (shown)

Distance versus interval of time for Free fall

$y = 0.2192x^2 + 1.2641x + 0.27$
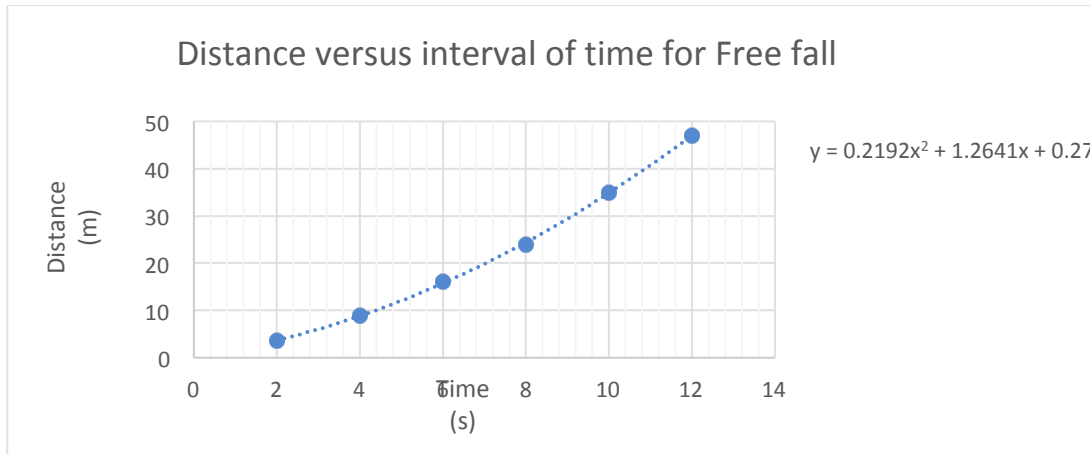
2 points

Title is provided, but the title does not effectively and/or correctly communicate the lab concept. For the data in this example, it can be seen from the equation of the trendline the lab is not a Free fall lab since the leading coefficient does not compare well with half the acceleration due to gravity (shown)

Another case is stating "Time versus Distance" or just "Distance versus Time"

Distance versus interval of time at constant acceleration

$y = 0.2192x^2 + 1.2641x + 0.27$
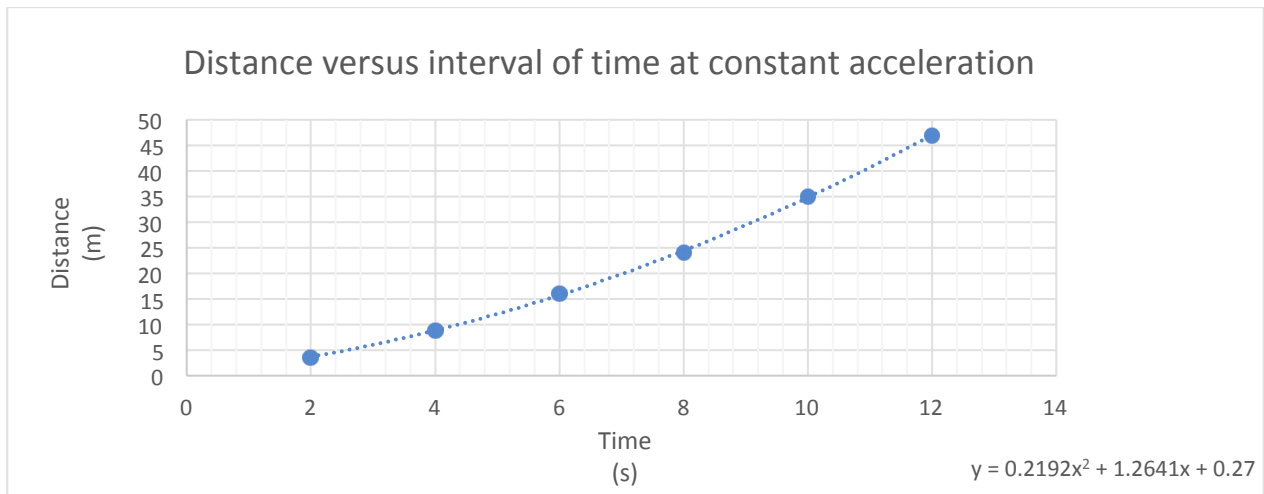
3 points

Title is provided and title effectively communicates lab concept (shown)

Examples for each type of point component for Formatting

Distance and time   y = 0.2192x² + 1.2641x + 0.27
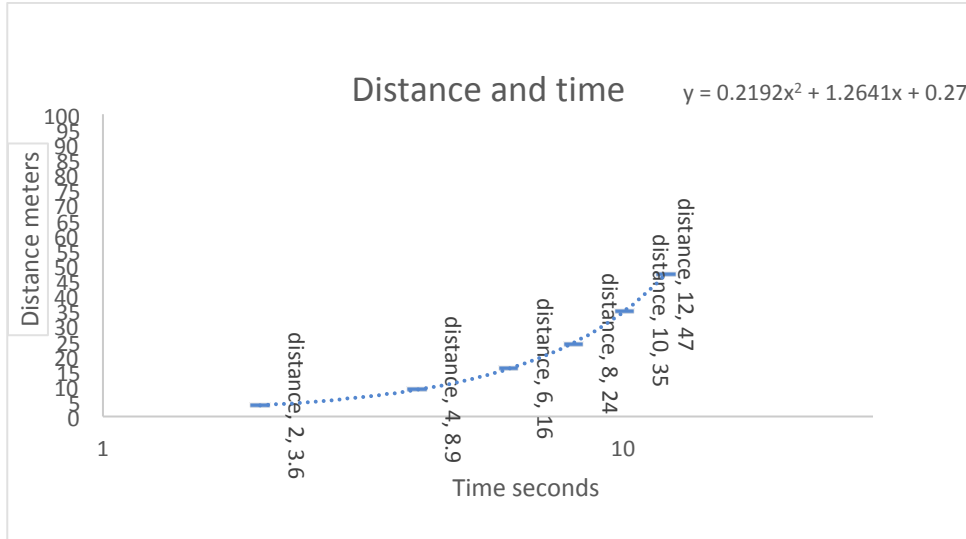
0 points

Graph is disorganized. The axes, or one of the axes, are not scaled to fit within range of data which leaves too much white space in the graph. The axes have too many tick marks labeled to distinguish the data in the graph. Data points are labeled with values, but values clutter the graph. Data points are not easily distinguishable due to the use of an incorrect marker (shown)

Overall, this is your call on whether you find the graph to be disorganized

Distance versus interval of time at constant acceleration

y = 0.2192x² + 1.2641x + 0.27
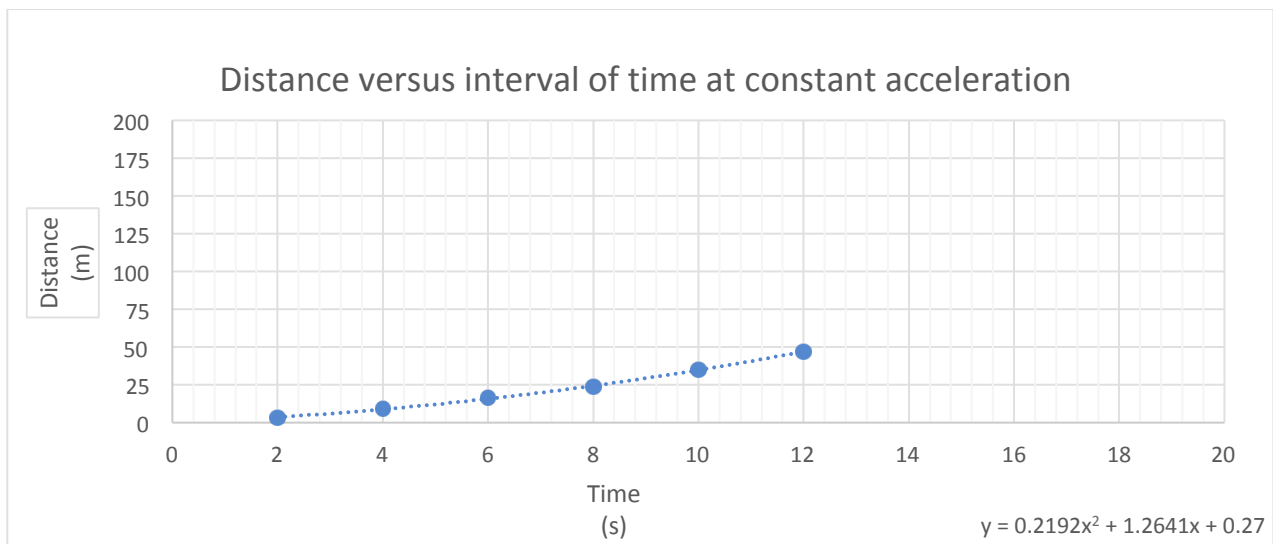
2 points

Graph is not scaled withing range of data (shown)

Distance versus interval of time at constant acceleration

$y = 0.2192x^2 + 1.2641x + 0.27$
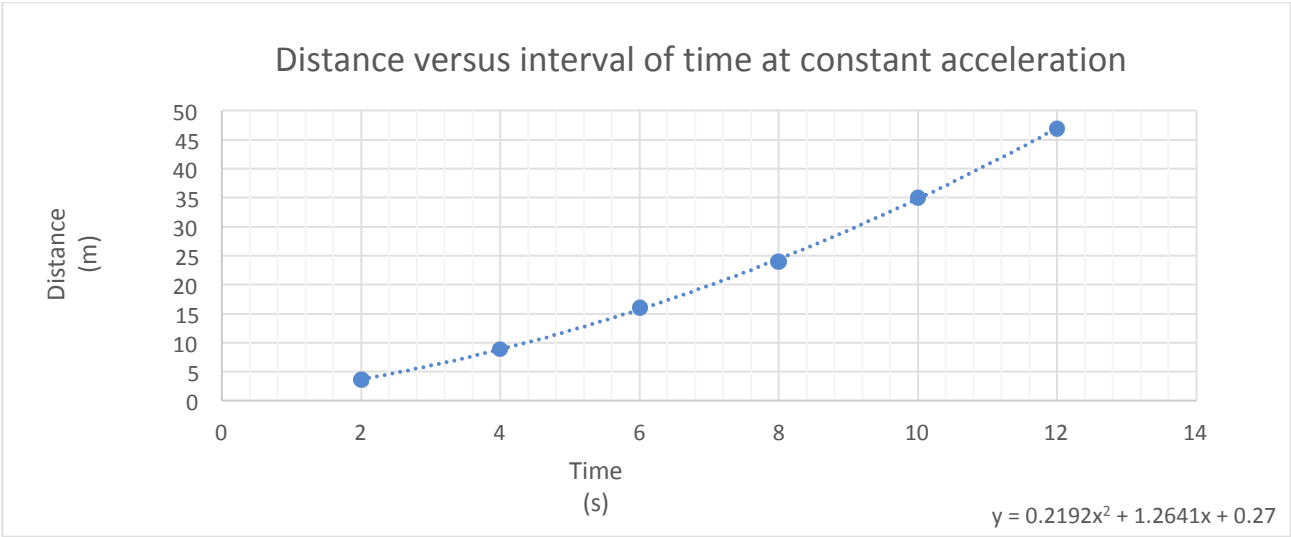
3 points

Graph is well organized (shown)

PART I: Importing the Teamwork assessment

Note: The Teamwork assessment will be attached to an email as a .zip file. Do not unzip it – Blackboard will unzip it automatically when it is uploaded.
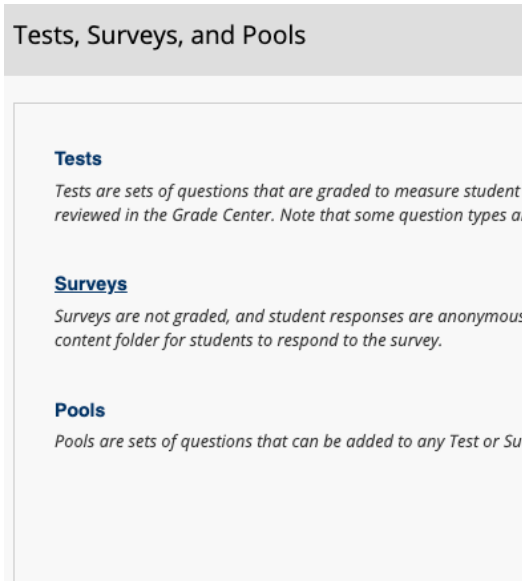
1. Open Blackboard.
2. In the left hand column, scroll down and open (click on the triangle) to open **Control Panel**.
3. Open **Course Tools.**
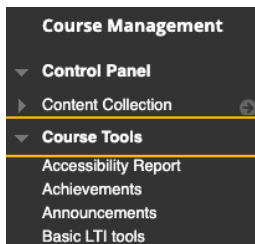
4. Scroll down to **Tests, Teamwork assessments, and Pools** and click to select.
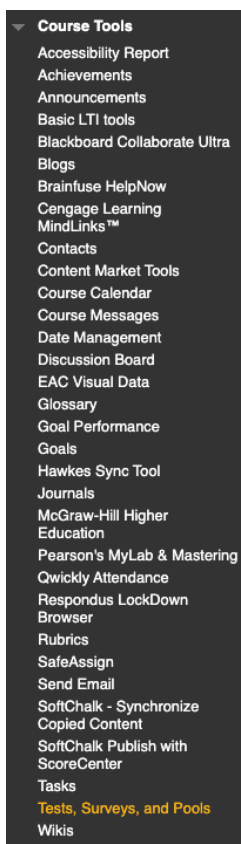
5. Click on **Teamwork assessments.**
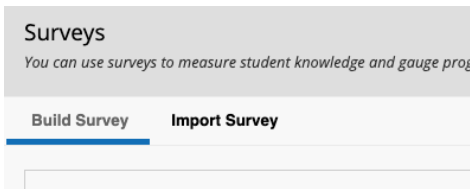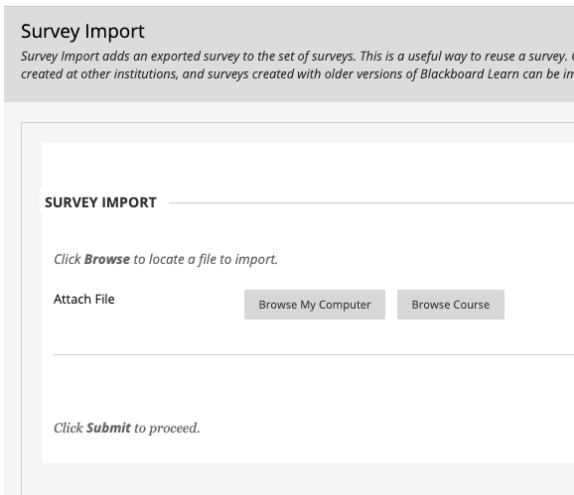
6. Select **Import Teamwork assessment.**

7. Select **Browse my computer** and navigate to where you saved the downloaded Teamwork assessment.

8. Click **Submit.**

9. When this screen appears, click on the **OK** at the bottom.

Part II: Adding the Teamwork assessment to a Content Area
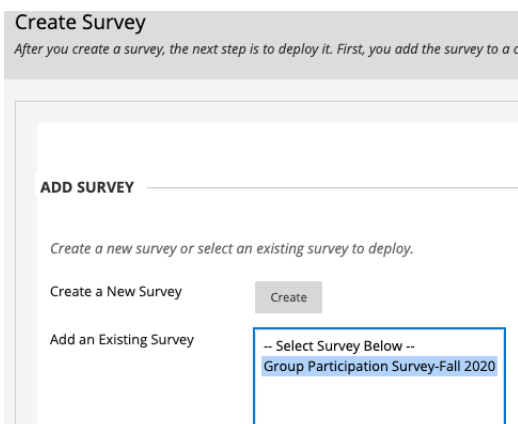
1. Navigate to where you want to add the Teamwork assessment. I chose to add it to **Useful Links.**
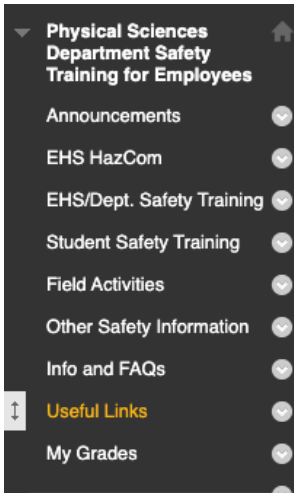
2. Select and select Teamwork assessment.
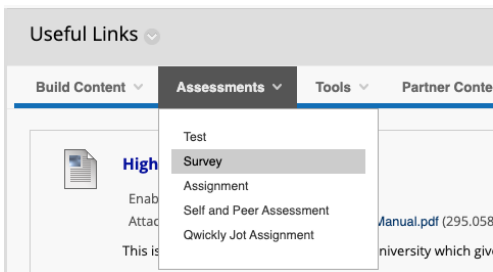
3. From the Teamwork assessment window, select the imported Group Participation Teamwork assessment and click **Submit.**

4. The Teamwork assessment Options window opens. Please check these options:
   a. Show Teamwork assessment description to students….
   b. Show instructions to students….
   c. Open Teamwork assessment in new window….

SURVEY INFORMATION

★ Name   Group Participation Surv

Choose Color of Name   ■ ✓ Black

Content Link Description

Austin Community College is interested in group activities that occur in Physics and A
thoughts about their participation in group activities.

Path: p

Survey Description   Austin Community College is interested in group activ
                          about their participation in group activities.

☑ Show survey description to students before they begin the survey.

Survey Instructions   Please select one answer for each question below.

☑ Show Instructions to students before they begin the survey.

Open Survey in New Window   ⦿ Yes ◯ No

5. Teamwork assessment Availability Options
   a. Make available to students
   b. Add a new announcement for this Teamwork assessment
   c. You can add Display after and Display until dates if you wish
   d. Do not check any other boxes

SURVEY AVAILABILITY

Make available to students   ⦿ Yes   ◯ No

Add a new announcement for this survey.   ⦿ Yes   ◯ No

☐ Multiple Attempts
     ◯ Allow Unlimited Attempts
     ◯ Number of Attempts

☐ Force Completion **(Not Recommended)**
Once started, this survey must be completed in one sitting. If a student's network connection is interrupted they will not be able to complete the assessment.

☐ Set Timer
Set expected completion time. Selecting this option also records completion time for this survey. Students will see the timer option before they b the survey.

     60   Minutes
     Auto-Submit
     ⦿ OFF   ◯ ON
     OFF: *The user is given the option to continue after time expires.*
     ON: *Test will save and submit automatically when time expires.*

☐ Display After   10/05/2020   🗓   12:04 PM   🕐
Enter dates as mm/dd/yyyy. Time may be entered in any increment.

☐ Display Until   10/05/2020   🗓   12:05 PM   🕐
Enter dates as mm/dd/yyyy. Time may be entered in any increment.

☐ Password
Require a password to access this survey.

Restrict Location   No restrictions (Test can be taken by the user anywhere) ⌄

    e. Add Due Date.

    f. Do not show Teamwork assessment results.

    g. Check Teamwork assessment Presentation – All at Once.

    h. Please do not check Randomize Questions.

6. Click **Submit.**

7. The Teamwork assessment should now be listed on the **Useful Links** page. Click on the triangle next to the Teamwork assessment name, and check that the Teamwork assessment is available to students.
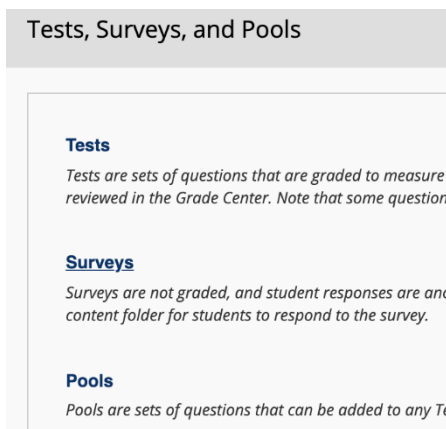
Part III: Exporting the Teamwork assessment Results

Note: Teamwork assessment responses are anonymous, so you will not be able to see who completed the Teamwork assessment.

1. In Course Management/Control Panel/Course Tools, scroll down to **Tests, Teamwork assessments, and Pools.**
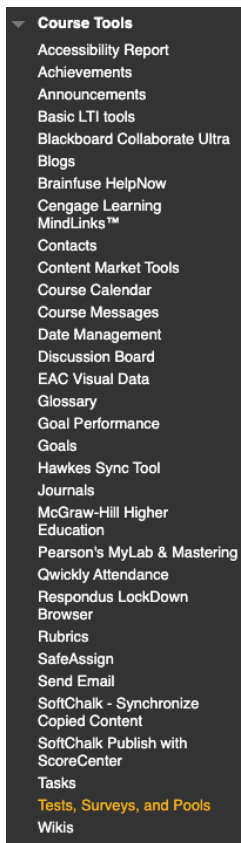
2. From the Tests, Teamwork assessments, and Pools window, select **Teamwork assessments.**

3. From the Teamwork assessments window, mouse over the down arrow at the end of the Group Participation Teamwork assessment-Fall 2020 Teamwork assessment, and select **Export.**
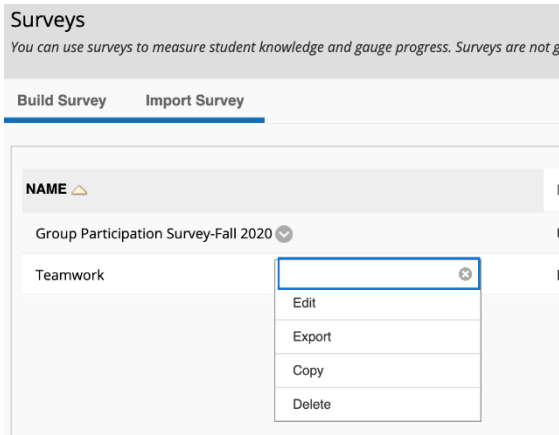
4. Choose a place of your computer to download to, and click **Save.** The Teamwork assessment downloads as a .zip file.

   IMPORTANT

5. Navigate to where you saved the Teamwork assessment file.

6. Right-click on the file and select **Rename.**

7. Use this naming convention:

   CourseNumber-Instructor'sLastName-Group Participation Teamwork assessment Fall 2020.

   (e.g. PHYS 1401-Watson-Group Participation Teamwork assessment-Fall 2020)

   Instructors names will be removed before the data is added to the results.

8. Attach the file to an email and send to June Mullin (jmullin@austincc.edu)