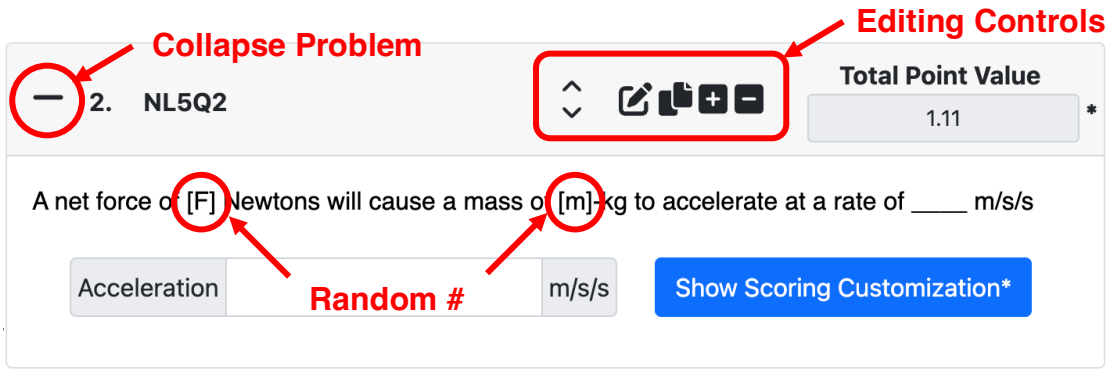
Modifying a Problem Set

The Calculator Pad was built to be a turnkey solution that provides busy teachers many ready-to-use problem sets on numerous topics. But at the same time, The Calculator Pad was built to be versatile enough to allow teachers to modify those problem sets with ease. Modifications include removing unwanted problems, adding problems from other problem sets, re-ordering problems, customizing the scoring and the number of attempts on selected problems, adding or changing or removing the help functions associated with problems, editing the problems, adding or subtracting parts from problems, and even writing one's own problems for inclusion on the problem sets. The directions below address many of these modifications. The task of Modifying a Problem and Writing Your Own Problem are addressed on other pages. The directions below pertain to how to modify one of our ready-to-use problems sets. The same directions can be used to modify your own problem sets or those of a colleague.

Modifications must be made before your assignment opens. Once students begin solving problems in the problem set, it's too late to change those problems or to change settings like the number of attempts or the score values.

1. Add the problem set you wish to modify to your class. It will display in the **Task Table** once it has been assigned. Keep the **Visible by Date** in the future. Launch the problem set in the **Assignment Builder** by tapping on the **Launch** button (🚀) to the left of the problem set name.

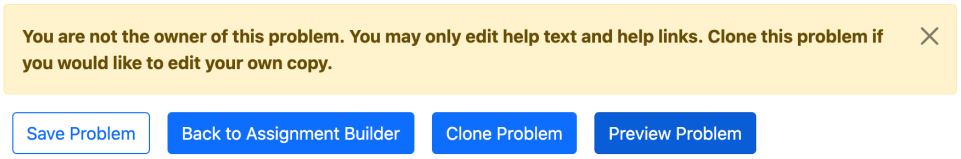
2. Each problem of the problem set is displayed in the **Assignment Builder**. Each problem has a panel of controls across the top of the problem. Each problem also includes a **Show Scoring Customization** button. The "code" of the problem is also shown; random numerals are represented by variable names enclosed in brackets.



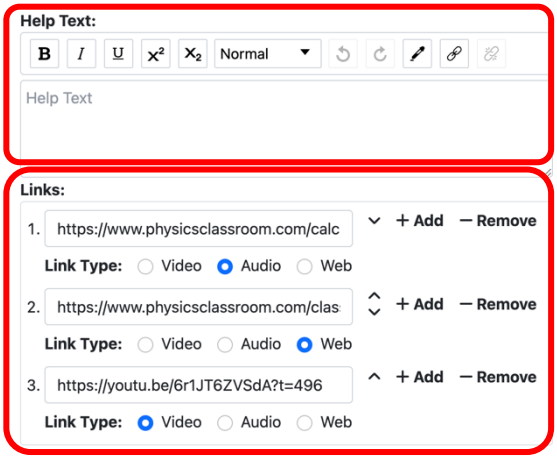
Control	Description of Action
	Reorder Buttons
⌃ ⌄	There are two buttons here – an **Up** and the **Down** button. The Up and Down buttons allow you to move a problem upward or downward within the problem set. All movements are reversible. Moving a problem does not change the name of the problem.

Edit Button

The **Edit** button allows you to edit the problem. One tapped, the problem opens in the **Problem Builder**. You are given the notice …



You can scroll through the problem and view its "code" and its answer parts. You are allowed to add or even change the contents of a Help field associated with the problem. For instance, you could add the text "Give attention to the units" or "See Example 3 on page 13 of your Unit Packet" or "Do well on this problem and you're going to ACE the test." You can also change, remove, or add to the Help links provided for the problem. For instance, you can add a link to a YouTube video that you have made. Once you've made your edits, tap on the **Save Problem** button at the top of the Problem Builder.



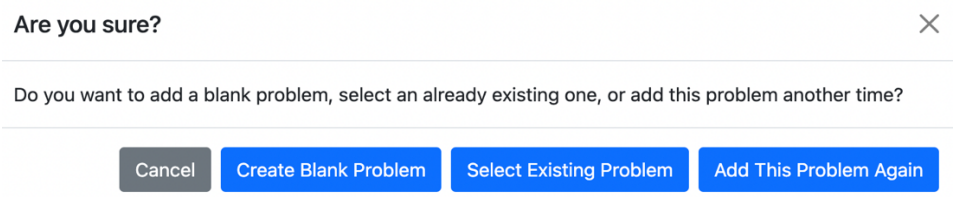
If you wish to make more *drastic* changes, you are offered the option to **Clone Problem**. When you clone a problem, a copy of the problem is stored in your personal **CalcPad Problem Library**. You will be able to edit the problem right there in the **Problem Builder**. The edited version becomes part of the problem set. The task of editing a problem is discussed on our **Modifying a Problem** document.

Duplicate Button

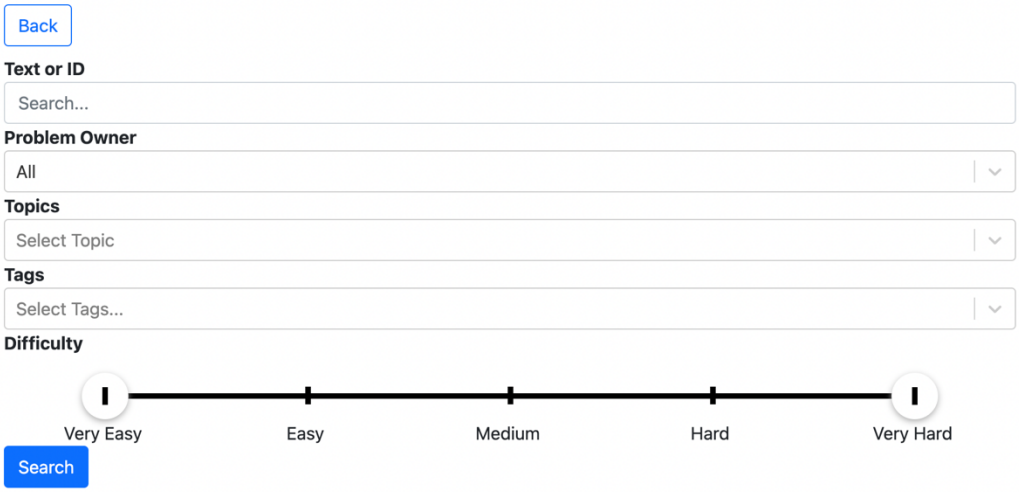
The **Duplicate** button will make a *second instance* of the problem and place it as the next problem in the problem set. The duplicate will be the very same problem. Students will see two identically worded problems with different numerical values, all of which are randomly generated.

Add/Remove Buttons

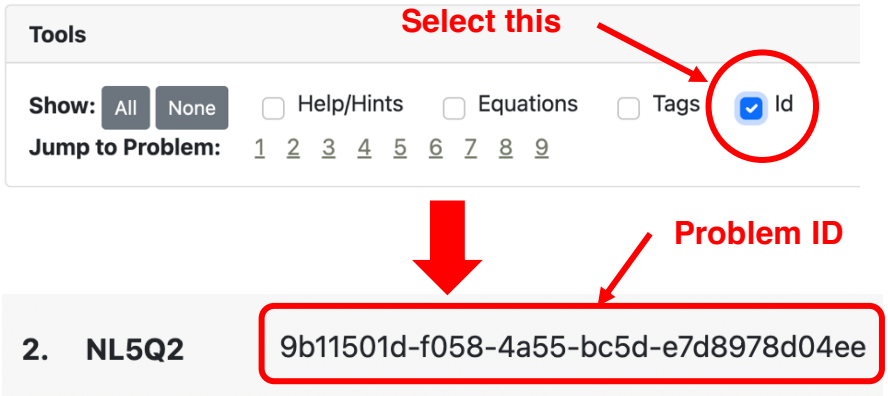
The **Remove** button will remove a problem from a problem set. The **Add** button allows you to add a problem to a problem set. You can add one of our *Public* problems, a problem you have written, or even a new problem that you create.



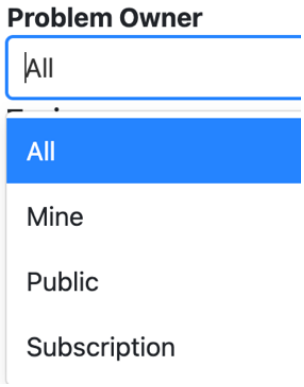
The **Create Blank Problem** button will open the **Problem Builder** so that you can write your own problem. The **Select Existing Problem** opens a Search window from which you can search for an existing problem. The Search window is shown below.

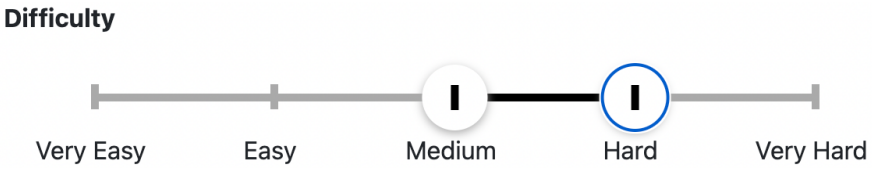


The easiest way to find a problem is to search by its ID or its text using the **Text or ID** search field. Tap the **Search** button. We will find the problem for you and display it with a **Select Problem** button. The ID of a problem is listed with the problem in the Assignment Builder. In the **Tools** panel at the top of the Assignment Builder, select **ID** in order to display the ID for each problem. It is listed in the grey field at the top of the problem (as shown). You can use any Problem ID present in our system, including an ID associated with a problem owned by a colleague.

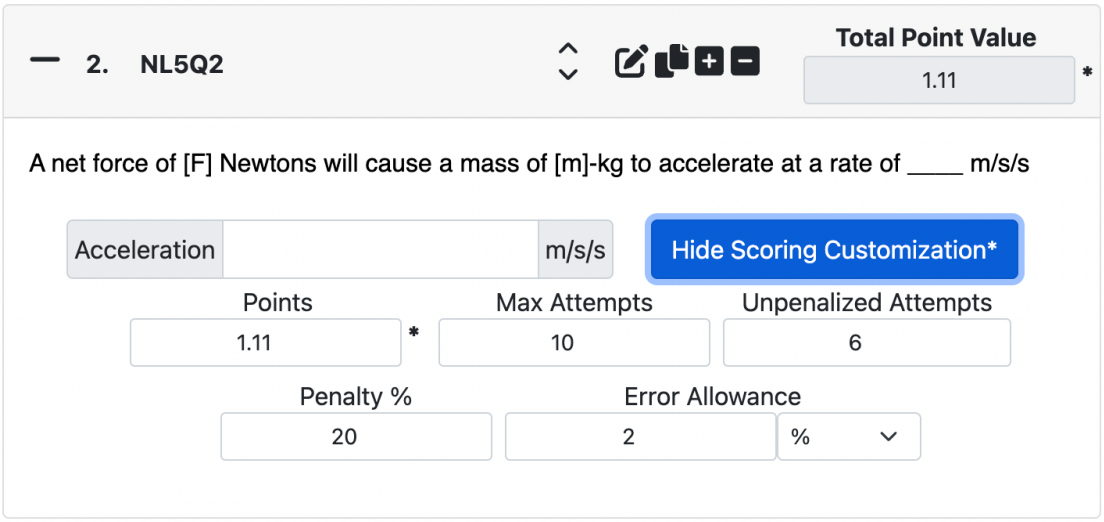


You can also search for problems using the topic or using a tag. A topic can be selected from the **Topics** pull-down menu. Tags can be typed into the **Tags** field. As you type the name of a tag from a limited number of options, we will begin to narrow the options down; select the tag you wish. (We publish a list of search tags to facilitate this task.) There are two search restrictions that can be used to narrow your search. You can restrict the returned search results by **Problem Owner**. **Public** problems are those that The Physics Classroom has created (>>2500 problems). You can narrow the search to problems that you or those in your Group Subscription have written. You can also narrow the search by restricting it to problems that have a specific difficulty rating or range of difficulty ratings.





3. The Assignment Builder allows you to customize the scoring and the number of attempts for individual problems within the problem set. The **Assignment Configuration** panel at the top of the Assignment Builder is used to set default values for individual problems and their parts. These default values can be overridden on a per problem part basis using the customization Assignment. Tap on the **Show Scoring Customization** button to display the customization controls. As shown below, you can customize the number of points for each problem part. You can also customize the number of allowed attempts, the number of unpenalized attempts, and the penalty percentage for each penalized attempt. Finally, you can customize the error allowance for any problem part. These settings are discussed in detail in our **Assigning a Problem Set** page. Changing any of these settings using the customization controls only changes them for the given part. The default settings are not affected. Be sure to tap on **Save Assignment** when you are done making changes.



4. The modifications that you made to your problem set were made in the **Assignment Builder**. It was originally opened in a separate browser tab using the **Launch Assignment** button on the Task Properties page. Save your assignment. Close the browser tab. Return to the Task Properties page.

Our Recommended Strategy

Most teachers will wish to create problem sets that include select problems from a variety of our problem sets. They may even wish to include a problem of their own or of a colleague. Begin by accumulating a list of the problem names. For instance, if you are preparing a problem set on Kinematic Equations, you might prepare a list of these problems:

K13Q1, K13Q2, K13Q5, K14Q5, K14Q7, and K15Q2

Once you prepared your list, launch the problem set that includes the greatest number of problems on your list. In this case, you would launch Problem Set K13. Once opened in the **Assignment Builder**, use the **Remove** (**–**) button to remove the problems you do not want. Then use the **Add** (**+**) button to add **Existing Problems**. Use the **Search** window to find a select problems K14Q5, K14Q7, and K15Q2 to be added to your problem set. Once you have grown accustomed to the process, you will likely find that it takes about 5 minutes to change your list into a problem set that is ready for students to use.