Topic: Significant Figures (x10)

1. After opening your D2L Brightspace course, click on Quizzes under ASSESSMENTS in the navigation bar of your course.

2. Click New Quiz to create the quiz and quiz settings.

3. Under the Properties tab, click Add/Edit Questions to start adding questions to your quiz.
4. Click on the type of question you want in your quiz.

5. When creating Significant Figures you will have to fill out the fields of **Title**, **Points**, **Difficulty**, and **Question Text Box**.
   - **Title**: The title is optional because it will only be displayed to the instructor to make finding questions easier.
   - **Points**: The points field is required, and is used to simply tell the point value of that question.
   - **Difficulty**: The difficulty field is a range of numbers 1-5 rating the difficulty of each question.
     - Choosing a difficulty for each question may make it easier for you to decide how many points you want the question to be worth.
   - **Question Text Box**: What is in the Question Text Box is what the students will see when looking at that question.
     - In Significant Figures, we will use **variables** in the question, but D2L will **exchange** those with random numbers so the student won’t see the variables the way we put them in.
6. If you want to add an image to your question, click **Add a File** and you will be able to search your pictures and attach it.

7. The **Formula field** is where you will put in the formula for solving your problem where there are certain functions that are capable of being used.

<table>
<thead>
<tr>
<th>Enumerations</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>%,^,,/,,*,-,+</td>
<td>Basic Mathematics</td>
</tr>
<tr>
<td>{x}^{y}</td>
<td>x to the power of y</td>
</tr>
<tr>
<td>abs ({n})</td>
<td>Absolute value of n</td>
</tr>
<tr>
<td>cos ({n})</td>
<td>Cosine of n (radians)</td>
</tr>
<tr>
<td>sin ({n})</td>
<td>Sine of n (radians)</td>
</tr>
<tr>
<td>sqr ({n})</td>
<td>Square root of n</td>
</tr>
<tr>
<td>tan ({n})</td>
<td>Tangent of n (radians)</td>
</tr>
<tr>
<td>log ({n})</td>
<td>Log base 10 of n</td>
</tr>
<tr>
<td>ln ({n})</td>
<td>Log base e of n</td>
</tr>
<tr>
<td>atan ({n})</td>
<td>Inverse tangent of n</td>
</tr>
<tr>
<td>sec ({n})</td>
<td>Secant of n</td>
</tr>
</tbody>
</table>
## Enumerations | Descriptions
---|---
cosec \((n)\) | Cosecant of \(n\)
cotan \((n)\) | Cotangent of \(n\)
Factorial | Factorials
Exp | Power of natural log \((e)\)
pi | \(\pi \approx 3.14159\) (up to 50 decimal places)
e | \(e \approx 2.71828\) (up to 50 decimal places)

Here is the **formula** we will use for this question.

8. The **Significant Figures** field allows you to set the number of significant figures in this question.
   - Here you can also select a percentage of the points you want deducted for an incorrect significant figure.

   *Make sure the Significant Figure you choose correlates with the figure you have in the question.*

![Significant Figures](image)

9. The **Tolerance Level** can be in units, percent, or by 0.5 from the significant figure.
   - This allows the answer to be off by 0.5 from the significant figure, or you can put in a number for the units or percent. **For example**, if you want the tolerance level to be 1, put a 1 in the units field and the answer will be tolerated if off by only 1 significant figure.

![Tolerance](image)

10. In the **Unit** text field, you will enter a unit type, for example, (inches, centimeter, meters, etc.) if the answer will require a unit.
- The **Worth** dropdown allows you to assign points for using the correct unit.

11. The **Variable** will be where you will put in the numbers you would like to be generated for the question.

   - You can add as many variables as the question needs by clicking **Add Variable**.
   - You can also get rid of any variables you don’t need by selecting the trash can to the right of the variable entry.

12. The information needed for the Variable will be the **Name**, **Min**, **Max**, **Decimal Places**, and **Step**.

   - **Name**: This will be the name of whatever variable you put in the question. For example, x.
   - **Min**: This will be the minimum value you want to be used for the variable.
   - **Max**: This will be the maximum value you want to be used for the variable.
   - **Step**: In the step field, you will type what increment you want the possible numbers to go by when choosing the numbers in between the minimum and maximum numbers you have specified.

   ➢ **Example**: In this specific question since we are only dealing with one number, our minimum and maximum will be the same number and we won’t have a step.

An example of how the step option is used can be found in the Arithmetic Question tutorial.

13. The last two options in Significant Figures are the **Question Hint** and **Question Feedback** (optional).

   - **Question Hint**: Hints will be shown in a dropdown menu in the quiz next to each question.
• **Question Feedback:** This option gives general feedback despite what is answered.

14. At the bottom of the page you will have different **saving** options.

• **Save:** Will save your question and take you back to the Question Library where we started out.

• **Save and Copy:** Will save your question and open a new question with the same information in case you want to create another question like this one.

• **Save and New:** Will save your question and open a new, blank question.

• **Preview:** You should preview your question to make sure it will be presented in the quiz the way you envisioned to be.

  - Previewing the question would be especially recommended with the Significant Figures Question so you can go back and adjust the question and variables, etc. and make sure the question answer is right.

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**For More Information**

Please contact Instructional Technology Services at [support@mnstate.edu](mailto:support@mnstate.edu) or 218.477.2603 if you have questions about this material.