**“Mice to Be Here” Math 20-2 Scale Project**

**2.5cm**

A graphic artist is creating computer-generated images for an animated movie. She has to create a school used by mice for the movie. She needs to scale everything that would appear in a regular school down to a size that is appropriate for mice.

**0.5cm**

**5.0cm**

1. What scale factor should she use?

Hint: How do the mouse’s dimensions compare to yours?

**6.0cm**

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| --- | --- | --- | --- |
| **Dimension** | **Mouse Measurement** | **Human Measurement** | **Scale Factor** |
| Height (cm) |  |  |  |
| Body width (cm) |  |  |  |

2. Measure the dimensions of our math classroom and three objects found in this room that you will use in the movie. Using your scale factor, calculate the ‘mouse’ dimensions of the objects to be used in the movie.

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| --- | --- | --- |
| **Dimension** | **My: Classroom** | **Mouse: Classroom** |
| **Length (cm)** |  |  |
| **Width (cm)** |  |  |
| **Height (cm)** |  |  |
| **Dimension** | **My:** | **Mouse:** |
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|  |  |  |
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| **Dimension** | **My:** | **Mouse:** |
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| **Dimension** | **My:** | **Mouse:** |
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3. Determine the volume of one of the objects you chose. Using your scale factor, calculate the volume of a similar object used for the movie. Show your calculations below.

**Volume of Original Item Volume of Movie Item**

4. Determine the surface area of one of the objects you chose. Using your scale factor, calculate the surface area of a similar object used for the movie. Show your calculations below.

**Surface Area of Original Item Surface Area of Movie Item**

5. Normal travelling speed for a mouse is 200cm/s. Determine whether students could walk from one end of the room to the other in the same time that a mouse would travel a similar distance in the room in their school.

6. Write a ratio to compare the speed of mice to the speed of humans.

7. You will need to advertise your movie. On your movie poster you’ll have a picture of the main mouse character. Draw a scale diagram of this character using the picture as a reference and the **scale factor of 3**. Add other details to make your poster resemble a movie poster.