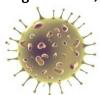
Math 9 Assignment 5: Proportional Reasoning

- 1. How many cm in 3 meters?
- 2. How many mm in a 2 km?
- 3. How many inches in a 4 miles given 1 mile = 5280 feet?
- 4. If a 6 cm long toy car is at a scale of 1:30 how long is the car in real life in meters?

- 5. A right triangle has side lengths of 3-4-5. This triangle is enlarged by a factor of 3.
 - a. Sketch these triangles
 - b. What is the perimeter of the larger triangle?
 - c. How many times larger is the area of the larger triangle vs. the smaller triangle?
- 6. Suppose the picture of the bacterial cell below is 4 cm wide. If the bacteria is 2 micrometers long in real life, what is the scale of this picture? (ex. 200:1, 1:2000, etc.)



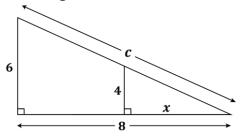
7. The following toy bus is 8 cm wide:



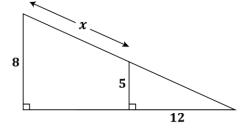
If the real bus is 4 m wide, what is the scale factor?

8. Your toy jet is 6 cm wide. It is at a scale of 3:140. How large is the plane in real life?

9. See triangle below:



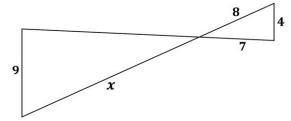
- a. Find c
- b. Find x
- 10. Find x in the diagram below:



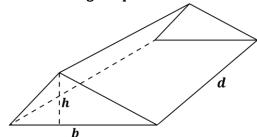
- 11. Suppose the Jeddah tower is 1100 m tall. The ruler measurement of a picture of this building is 8 cm. The ruler measurement of the picture of the monster is 3 cm.
 - a. How tall is the monster in real life?



12. Find x in the diagram below:



13. See the triangular prism below:



If all dimensions are tripled, how many times larger is the volume of the larger prism?