# *MPM1D – Surface Area and Volume Problems*Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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FROM THE TEXTBOOK: p. 441 #1a, 4b, 7 p. 454 #1a, 2b, 5, 7 p. 447 #2  
 p. 459 #1a, 4 p. 465 #1a, 2, 4, 7

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| 1. Calculate the surface area and volume of the cone in the diagram. | 1. A container is made up of a cone and a cylinder. The cone and cylinder in the diagram below have the same height. What is the volume of the container? |
| 1. The diagram shows a greenhouse that is built in the shape of a half-cylinder. Material to cover the roof costs $3/m2. The shaded ends are not covered. What is the cost to cover the roof? |
| 1. An ice cream store makes an ice cream cone as shown in the diagram. The cone is open topped, and the entire outside is coated in chocolate. Find the surface area that is coated in chocolate. | 1. Paper is used to make a popcorn container in the shape of an open-topped cylinder. Calculate the amount of paper needed to make the container. |
| 1. Calculate the volume of the figure shown in the diagram. | 1. How many times bigger is the volume of the bigger sphere? |

**ANSWERS TO WORKSHEET**

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| **1. V=314.2 cm3 SA = 282.7cm2** | **2. V=3015.9cm3** | **3. $7539.82** | **4. SA=219.8cm2** |
| **5. SA=1498.5cm2** | **6. V=76 ft2** | **7. 8 times** |  |