

Name \_\_\_\_\_

Pre-Calculus H

Date \_\_\_\_\_

Practice Problems

**SHOW ALL WORK!**

1. A box has the following specifications for its dimensions: the length has to be 3 inches more than twice the width and the height has to be 1 inch less than five times the width. Create an equation to model the volume of the box. Then construct an equation if the volume of the box must be 20 cubic inches and determine its dimensions.

2. A box has the following specifications for its dimensions: the length has to be 3 inches more than twice the width and the height has to be 1 inch less than five times the width. Create an equation to model the volume of the box. Then construct an equation if the volume of the box must be 378 cubic inches and determine its dimensions.

3. A box has the following specifications for its dimensions: the length has to be 3 inches less than the height and the width has to be 5 inches less than twice the height. Create an equation to model the volume of the box. Then construct an equation if the volume of the box must be 50 cubic inches and determine its dimensions.

4. A box has the following specifications for its dimensions: the length has to be 3 inches less than the height and the width has to be 5 inches less than twice the height. Create an equation to model the volume of the box. Then construct an equation if the volume of the box must be 440 cubic inches and determine its dimensions.