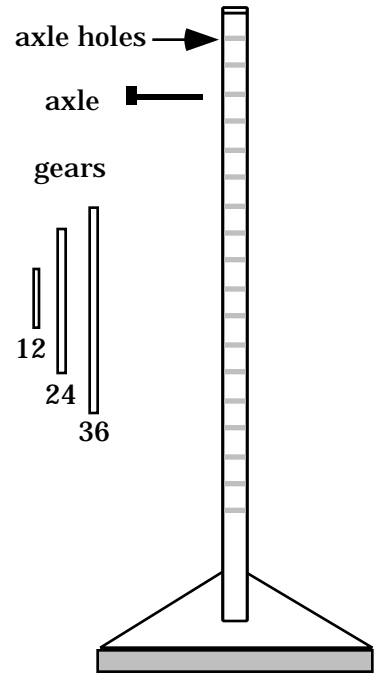


Gear Machines Worksheet (For Homework)

Name _____ Date _____ Period _____

Using the types of equipment shown at the right, construct the following gear machines according to the total gear ratios needed for each machine.

For each problem: 1-write out the single gear ratios needed to produce the total gear ratio. 2-Show where each type of gear belongs on the stand at the bottom of the page using a side view of the setup. Use your scale model gear ratio cutouts, to determine where the gears need to be placed. Line up the axles on one gear ratio with the axle on gear ratio below it. Always alternate the position of the gear ratios you use from inner to outer to inner position, etc. The top and bottom axles can only have one gear on the axles.



1. Construct a gear machine with a total gear ratio of $9/2$

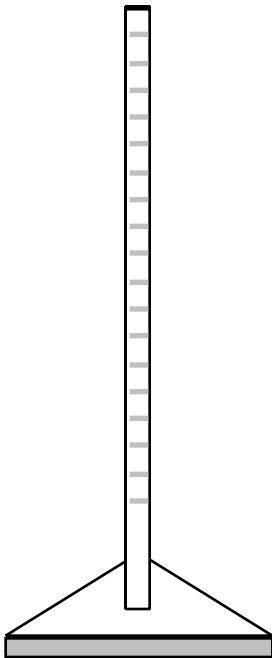
Single gear ratios needed _____

2. Construct a gear machine with a total gear ratio of $27/4$

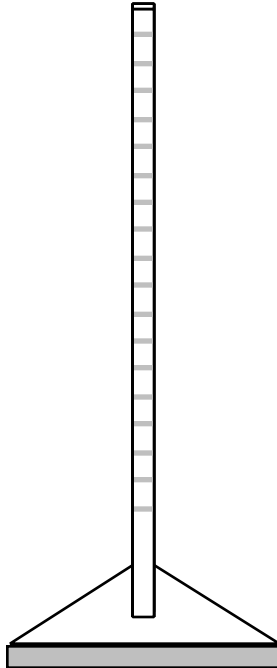
Single gear ratios needed _____

3. Construct a gear machine with a total gear ratio of $9/8$

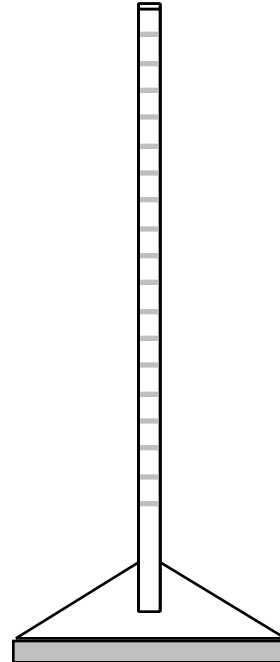
Single gear ratios needed _____



Problem # 1



Problem # 2



Problem # 3