

Gear Worksheet (For homework only)

Name _____ Date _____ Period _____

Look at the chart below showing various sets of gears on axles. If two gears are next to each other in the same axle position (either both are in the inner position or both are in the outer position),they will mesh together. **Circle pairs of gears that mesh together in the chart below.** The first setup below has **3** sets of inter meshing gears.

1.

Your Gear Machine		
axle	Inner Position X or number of teeth	Outer Position X or number of teeth
1	36	x
2	12	36
3	24	12
4	12	

Each place where the gears mesh defines a gear ratio. Use the space below to write down the gear ratios in your machine,and then multiply the ratios to calculate the total gear ratio. Write the total gear ratio in simplest terms.

2. The gear machine represented by the chart below has 4 sets of inter meshing gears. **Circle pairs of gears that mesh together in the chart below.**

Your Gear Machine		
axle	Inner Position X or number of teeth	Outer Position X or number of teeth
1	x	24
2	12	36
3	36	x
4	12	24
5	x	36

Use the space below to write down the gear ratios in your machine,and then multiply the ratios to calculate the total gear ratio. Write the total gear ratio in simplest terms.