Worksheet 6.3 – More Bike Practice Name _____

Carlita's mountain bike has a crankset of 3 sprockets with 42, 30, and 24 teeth; the bike has 4 sprockets for the rear wheel with 24, 21, 18 and 15 teeth.

1. What is the largest transmission factor? What is the smallest transmission factor?

2. If Carlita pedals at 25 rpm, how fast will the rear sprocket and wheel turn at the highest transmission factor?

3. If Carlita pedals at 30 rpm, how far will she travel in one minute (using the largest transmission factor)? The radius of the wheel is 24 cm.

4. If Carlita travels 7642 cm in one minute, how many revolutions per minute is she pedaling? (Use the largest transmission factor.)

Worksheet 6.3 – More Bike Practice Name _____

Carlita's mountain bike has a crankset of 3 sprockets with 42, 30, and 24 teeth; the bike has 4 sprockets for the rear wheel with 24, 21, 18 and 15 teeth.

1. What is the largest transmission factor? What is the smallest transmission factor?

   2.8   1

2. If Carlita pedals at 25 rpm, how fast will the rear sprocket and wheel turn at the highest transmission factor?

   70 rpm

3. If Carlita pedals at 30 rpm, how far will she travel in one minute (using the largest transmission factor)? The radius of the wheel is 24 cm.

   12667 cm/min.

4. If Carlita travels 7642 cm in one minute, how many revolutions per minute is she pedaling? (Use the largest transmission factor.)

   18 rpm