**Directions:** Read the problems and using dimensional analysis (when appropriate) to answer the questions.

1. John rode 2 kilometers on his bike. His sister Sally rode 3000 meters on her bike. Who rode the farthest and how much farther did they ride (answer in km)?
2. Jessica is measuring two line segments. The first line segment is 30 cm long. The second line segment is 500 mm long. How long are the two line segments together? (answer in cm)
3. Lois wants to send a box of oranges to a friend by mail. The box of oranges cannot exceed a mass of 10 kg. If each orange has a mass of 200g, what is the maximum number she can send?
4. Walt grew 10 centimeters in 1 year. He is now 1.6 m tall. How tall was he 1 year ago?
5. Mary buys a reel of thread for sewing. There are 10 m of thread on the real. She uses 210 cm. How much is left on the reel in centimeters?
6. Mr. Martin's Spanish class is 45 minutes long. If it starts at 3:30, what time does it end?
7. Sebastian studies from 3:15 - 4:45. His sister, Sasha studies from 4:30 - 6:15. Who studied longer and by how much?
8. Peter is overweight. He is 105 kg. His aim is to lose 500 g per week. If he manages this, how many weeks will it be until he is 90 kg?
9. 30 g serving of a certain breakfast cereal has 0.5 g of salt. How much salt would that be in milligrams?
10. Chase measured a line for his art project. It is 200 millimeters long. How many centimeters is the line?
11. Cheryl is moving to a new house. Her old house is 3 kilometers from her new house. How many meters is the old house from the new house?
12. Carlos has a 1.2 meter long piece of wood. He wants to cut it into 3 equal lengths. How long should each piece be in millimeters?
13. Jessica's shoebox is 20 centimeters long and 10 centimeters wide. How many more millimeters is the length of the shoebox than the width?
14. A box contains 4 bags of sugar. The total mass of all 4 bags is 6 kg. What is the mass of each bag in grams?
15. Steven goes to the grocery store and is looking at a winter squash. It has a mass of 1.8 kilograms. How many grams is the winter squash?
16. Michelle exercises for half an hour every day. How many minutes in total does she exercise for over 5 days?
17. It takes 3 hours to wash every window on a building. There are 30 windows. How many minutes does it take to wash each window?
18. A peach weighs 65 grams. If you buy 10 peaches and they sell for $5.50 per kilogram, how much will they cost?
19. Instant Meals sent out free samples to introduce its new product, Sesame soup. Each sample weighs 69 ounces. The post office charges thirty-six cents for every 23 ounces of weight. How much would Instant Meals spend on postage to mail out one hundred eighty-eight samples?
20. There is a jar on the cabinet by the refrigerator. If Dorian pours 114 ounces of water into the jar three times to fill it, how many quarts of water does it take to fill the jar? (round to the nearest whole number)
21. John wanted to impress his friends by winning the 200 yard dash at the track meet. If he runs 8.2 feet per second, how long will it take him to complete the dash? (round to the nearest tenth)
22. Lizzy saw a raccoon in her backyard last weekend. She put out some water and a bowl with 3 cups of food. The raccoon drank all the water and ate 1/2 the food. How many ounces of food did the raccoon eat?
23. Kelsey has a new baby brother! He weighs 8 lbs 3 oz. The doctor said the baby should gain about 5 ounces per week. At that rate, how much should the baby weigh in 3 months (12 weeks)? In lb and oz
24. The police went on a wild chase to catch a man speeding through town in a black pick-up truck. At times their speeds exceeded eighty-five miles per hour. At that rate, how many miles would the car go in 20 minutes? (round to the nearest whole mile)
25. Melissa's boyfriend gave her a 2 lb heart-shaped box of chocolates for Valentine’s Day. The box had 68 pieces of chocolate. What was the average weight for each piece of chocolate? (round to the nearest hundredth)