1. Michigan State just missed a first down. The referee says the ball is $1/10^{th}$ of a yard short. How many millimeters is this?

$$\frac{0.1\,yard}{1} \times \frac{0.9144\,meters}{1\,yard} \times \frac{1000\,mm}{meter} = 91.4\,mm$$

2. You are drinking some Guinness in Scotland and they bring you a pint of beer. How many liters is this equal to?

$$\frac{1\,pint}{1} \times \frac{16\,ounces}{1\,pint} \times \frac{29.573\,mL}{1\,ounces} = 473\,mL \text{ or } 500\,mL \text{ (rounded)}$$

3. Your new nephew is 5 lbs 3 oz. How much does he weigh in kilograms? NOTE: The conversion table you have erroneously has 1 pound = 0.454 grams…that should be kilograms!

$$\frac{5\,pounds}{1} \times \frac{0.454\,kilograms}{1\,pound} = 2.27\,kg$$

$$\frac{3\,oz}{1} \times \frac{28.35g}{oz} \times \frac{1\,kg}{1,000\,g} = 0.085\,kg$$

$$2.27\,kg + 0.085\,kg = 2.36\,kg$$

4. The prescription for your dog's antibiotic calls for 20 tsp of medicine twice a day. How much is the daily dose in milliliters?

$$\frac{20\,tsp}{1} \times \frac{1\,tbsp}{3\,tsp} \times \frac{1\,fl.\,oz}{2\,tbsp} \times \frac{29.573\,mL}{1\,fl.\,oz} = 98.58\,mL \text{ per dose x } 2\,\frac{doses}{day} = 197.2\,mL$$

5. Your property lot is 120 feet deep. How many kilometers is this?

$$\frac{120\,feet}{1} \times \frac{0.3048\,meters}{1\,foot} \times \frac{1\,km}{1,000\,meters} = 0.037\,km$$