

Name: _____ Block: _____ Date: _____

Chemistry 11
Metric Conversions

Do the following exercises using the unit conversion method. Ensure that you **show your units** at all times! All answers should also obey the rule of 1000.

1. Convert 50 mL into litres.

2. Convert 2 L into microlitres.

3. Convert 25 kg into grams

4. Convert 3 Mm into metres.

5. Convert 2 L into decilitres.

6. Convert 7 μs into milliseconds.

7. Convert 51 kg into milligrams.

8. Convert 3125 μL into kilolitres.

9. Convert 1.7 μg into centigrams

10. Convert 1 year into seconds.

11. Convert 1 mg/dL into grams per litre.

12. Convert 1 $\text{cm}/\mu\text{s}$ into kilometres per second.

13. Convert 1 cg/mL into decigrams per litre.

14. A hippopotamus has a mass of 1500 kg. An eagle comes and lands on his back. The eagle weighs 2000 g. How much do the hippo and the bird weigh together?
15. John ran 10000 cm. Sarah skied 0.1 km. Who travelled farther?
16. A mosquito sucks 0.1 mL of blood out of human. A bat sucks 0.1 dL out of a cow. How many times more blood does the bat drink than the mosquito?
17. An elevator has a weight capacity of 800 kg. There are 10 people in the elevator, each weighing 65000 g. This brings the total weight in the elevator to a whopping 650000 g! Why doesn't the elevator plummet to the earth?
18. Joe lives by the ocean. He keeps his pool partway full with 37 hL of water. One day a tsunami comes and crashes right into his pool filling it to the top. The pool now contains 10 kL of water. How much water did the tsunami dump into the pool?
19. A silver bar has a mass of 1 kg. If 1 troy ounce has a mass of 31.1 g and silver sells for \$7.50 per troy ounce, how much is the silver bar worth?
20. A sorcerer sells love potions in 5 dram containers. If 1 dram has a volume of 60 minims and 1 mL has a volume of 16.2 minims, what is the volume of the love potion, expressed in millilitres?
21. If a block of uranium has a density of 18.95 kg/L, how many centigrams of uranium are in 50 mL?

Give the name of the metric unit of mass, volume or distance that is:

- a) equal to 1000 milligrams _____
- b) 10 times smaller than a centigram _____
- c) equal to 10 hectometres _____
- d) equal to 100 centimetres _____
- e) 10 times smaller than a decilitre _____