

Multiplying by Powers of 10 Word Problems

01. A bacteria multiplies by a factor of 10 every hour. If there are 100 bacteria initially, how many will there be after 3 hours?
02. The length of a wire is 2.5 meters. If it is stretched by a factor of 100, what is the new length?
03. A recipe calls for 0.05 grams of saffron. If you want to make 100 times the recipe, how much saffron will you need?
04. The population of a town is 5,000. If the population increases by a factor of 1,000, what will be the new population?
05. A car travels at a speed of 0.02 kilometers per hour. How far will it travel in 500 hours?
06. The weight of a paperclip is 0.01 grams. How much would 1,000 paperclips weigh?
07. A container holds 0.005 liters of milk. If you have 200 containers, how many liters of milk do you have?
08. The cost of a candy bar is \$0.25. If you buy 10 candy bars, how much will you spend?
09. A marathon race is 42 kilometers long. If you run 100 marathons, how many kilometers will you run in total?
10. A student has a test score of 80 out of 100. If the test is worth 1,000 points, how many points did the student earn?

11. A train travels at a speed of 0.1 kilometers per minute. How far will it travel in 20 minutes?
12. The weight of an apple is 0.15 kilograms. How much would 50 apples weigh?
13. A container holds 0.002 liters of juice. If you have 500 containers, how many liters of juice do you have?
14. The cost of a movie ticket is \$10. If you buy 5 tickets, how much will you spend?
15. A swimming pool contains 0.03 liters of water. How many milliliters of water does it hold?
16. A company produces 500 units of a product per day. If they work for 10 days, how many units will they produce?
17. The length of a wire is 0.03 meters. If it is stretched by a factor of 1,000, what is the new length?
18. A recipe calls for 0.002 grams of a rare spice. If you want to make 1,000 times the recipe, how much spice will you need?
19. The population of a city is 10,000. If the population increases by a factor of 100, what will be the new population?
20. A car travels at a speed of 0.05 kilometers per hour. How far will it travel in 200 hours?