

The simplest three conversions you should be able to do very quickly, in a moment, without thinking about conversion factors or any more complicated method.

All of these conversions come up *very frequently* when doing physics labs. You do them only by moving the decimal point!

Conversion	How to move the decimal point	Example
Centimeters to meters.	2 spaces LEFT	54 cm => 0.54 m
Meters to centimeters	2 spaces RIGHT	0.47 m => 47 cm
Grams to kilograms	3 spaces LEFT	159 g => 0.159 kg
Kilograms to grams	3 spaces RIGHT	0.834 kg => 834 g
Milliseconds to seconds	3 spaces LEFT	842 ms => 0.842 s
Seconds to milliseconds	3 spaces RIGHT	0.472 s => 472 ms

**Practice Problems:**

1. Convert 173 milliseconds to seconds.
2. Convert 43 centimeters to meters.
3. Convert 0.547 seconds to milliseconds.
4. Convert 763 milliseconds to seconds.
5. Convert 0.192 seconds to milliseconds.
6. Convert 624 milliseconds to seconds.
7. Convert 81 centimeters to meters
8. Convert 0.522 kilograms to grams.

You must be able to solve each of these problems VERY VERY quickly!  
Not more than five seconds per problem.

- 9.** Convert 943 grams to kilograms.
- 10.** Convert 0.61 meters to centimeters.
- 11.** Convert 0.242 kilograms to grams.
- 12.** Convert 5 centimeters to meters.
- 13.** Convert 23 grams to kilograms.
- 14.** Convert 11 milliseconds to seconds.
- 15.** Convert 0.79 kilograms to grams.
- 16.** Convert 0.4 meters to centimeters.
- 17.** Convert 0.3 seconds to milliseconds.
- 18.** Convert 5 milliseconds to seconds.
- 19.** Convert 845 centimeters to meters.
- 20.** Convert 5454 grams to kilograms.

**Answers:**

**1.** 0.173 s

**2.** 0.43 m

**3.** 547 s

**4.** 0.763 ms

**5.** 192 ms

**6.** 0.642 s

**7.** 0.81 m

**8.** 522 g

**9.** 0.943 kg

**10.** 61 cm

**11.** 242 g

**12.** 0.05 m

**13.** 0.023 kg

**14.** 0.011 s

**15.** 790 g

**16.** 40 cm

**17.** 300 ms

**18.** 0.005 s

**19.** 84.5 m

**20.** 5.454 kg