

To practice for the quiz on Thursday, please solve each problem by using the *conversion factor method*, like we did in class the other days. If you have any trouble, get a friend to help!

I filled out the first box myself to show you how to use the boxes.

1 meter = 3.28 feet

1 foot = 12 inches

1 mile = 1.61 kilometers

1 kilo meters = 1000 meter

1. EXAMPLE Convert 5 feet to meters: **EXAMPLE:**

Convert from:	To:	Conversion Factor:
FEET	METERS	1 meter = 3.28 feet
$\frac{5 \text{ feet}}{1} \left(\frac{1 \text{ meter}}{3.28 \text{ feet}} \right) = \frac{5}{3.28} \text{ meters} = 1.52 \text{ meters}$		
<p>Answer in a complete sentence <i>with unit</i>:</p> <p>5 feet is equal to 1.52 meters.</p>		

2. Convert 9 feet to meters:

Convert from:	To:	Conversion Factor:
<p>Answer in a complete sentence <i>with unit</i>:</p>		

3. Convert 300 feet to meters:

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

4. Convert 3 meters to feet:

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

5. Convert 100 meters to feet:

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

6. Convert 5 kilometers to miles:

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

7. Convert 6 miles to kilometers:

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

8. The United States is about 3000 miles across. How many kilometers is this?

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

Part 2: Two-Step Conversions**9.** Convert 1238 feet to kilometers:

Convert from:	To:	Conversion Factors:
Answer in a complete sentence <i>with unit</i> :		

10. Convert 42188 feet to kilometers:

Convert from:	To:	Conversion Factors:
Answer in a complete sentence <i>with unit</i> :		

11. Convert 2 meters to inches:

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

12. Convert 24 inches to meters:

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

13. Convert 26 inches to meters

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

14. This room is about 19 meters long. Convert 19 meters to miles.

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

Part 3: Three Step Conversions

15. Convert 20 inches to kilometers:

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

16. Convert 2 kilometers to inches

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

Part C: Moles and Atoms:

$$1 \text{ mole} = 6.02 \times 10^{23} \text{ atoms}$$

When solving these problems, continue to *always use* the conversion factor method!

17. Convert 3 moles to atoms.

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

18. Convert 12 moles to atoms.

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

19. Convert 8.0×10^{24} atoms to moles.

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

20. Convert 2.0×10^{21} atoms to moles.

Convert from:	To:	Conversion Factor:
Answer in a complete sentence <i>with unit</i> :		

Part D: Molar Mass

21. What is the molar mass of Titanium?

22. What is the molar mass of Thorium?

23. What element has a molar mass of very close to 14?

24. What element has a molar mass of very close to 1?