

P.I. A.M.2: Solve problems involving conversions within measurement systems, given the relationship between the units

1. Use the expression $F = \frac{9}{5}C + 32$ to change from the Celsius scale to the Fahrenheit scale. What is -4°C in Fahrenheit?

2. The formula for converting degrees Fahrenheit (F) to degrees Celsius (C) is $C = \frac{5}{9}(F - 32)^{\circ}$. Find the equivalent Celsius temperature when the temperature is 77°F .

3. In the formula $w = -39 + \frac{3}{2}t$, w is the approximate windchill temperature when the wind speed is 20 mi/h, and t is the actual air temperature. Find the approximate windchill temperature when the actual air temperature is -5°F and the wind speed is 20 mi/h.

4. A box of spaghetti weighs 1 pound. Lindsay cooked 9 oz of the spaghetti. Will she be able to make another meal of equal size with the remainder of the box?

5. Tomatoes cost \$1.56 a pound. If Suzanne purchased 36 ounces of tomatoes, how much did she pay? Round to the nearest cent.

6. Complete: 15,840 ft = ____ mi

7. Complete: 20 ft = ____ yd

8. The North building of the World Trade Center is 1,368 ft tall. Estimate how many yards tall it is.

[A] 40 [B] 4,000 [C] 400 [D] $\frac{1}{4}$

9. Convert 12 cups to quarts.

10. Convert 14 pints to gallons.

11. Complete: 955 mL = ____ L

[A] 0.955 [B] 955,000
[C] 9.55 [D] 95,500

12. 3 h is equivalent to

[A] $\frac{10}{24}$ day. [B] $\frac{3}{24}$ day.
[C] $\frac{1}{24}$ day. [D] $\frac{5}{24}$ day.

13. If a clock ticks every second, how many times does it tick in a year?

[A] 3.0476×10^6 [B] 2.98×10^8
[C] 3.1536×10^7 [D] 3.169×10^7

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[1] about 25°F _____

[2] 25°C _____

[3] -46.5°F _____

No. There is only 7 oz of spaghetti left and
[4] Lindsay needs 9 oz for another meal. _____

[5] \$3.51 _____

[6] 3 _____

[7] $6\frac{2}{3}$ _____

[8] C _____

[9] 3 quarts _____

[10] $1\frac{3}{4}$ gallons _____

[11] A _____

[12] B _____

[13] C _____