

Fractions and Decimals in Measuring Units

Express the distance 2 ft 5 in in feet, using a decimal rounded to two decimal digits.

First write 2 ft 5 in as a mixed number: it is the same as $2 \frac{5}{12}$ feet.

Then use the calculator to find $\frac{5}{12}$ as a decimal.

Since $\frac{5}{12} = 0.4\overline{16}$, therefore 2 ft 5 in is $2.4\overline{16}$ ft or ≈ 2.42 ft.

1. Express the measurements as indicated, using a decimal rounded to two decimal digits.



a. 2 lb 7 oz = _____ lb b. 6 ft 9 in. = _____ ft c. 5 T 250 lb = _____ T

d. 7 gal 3 C = _____ gal e. 20 ft 11 in. = _____ ft f. 2 qt 15 oz = _____ qt

g. 17 ft 11 in = _____ ft h. 1 pt 4 oz. = _____ pt i. 2 gal 45 oz = _____ gal

2. A baby weighs 9.87 pounds. Is this more or less than 9 lb 14 oz?



3. A room measures 12 ft 5 in \times 8 ft 11 in.

Express these dimensions in feet, and then calculate the area of the room in square feet.



Express the weight 12.37 lb using pounds and ounces.

We need to express 0.37 as a fraction with denominator 16. There's another way to do this, but for now, we'll just *guess and check!*

First, use common sense: 0.37 is *not* $\frac{15}{16}$ nor $\frac{1}{16}$. But it *might* be $\frac{5}{16}$ or $\frac{6}{16}$ or even $\frac{7}{16}$ —it's obviously less than half ($0.50 = \frac{8}{16}$). Now use the calculator to convert the likely fractions to

decimals and check which of them is closest to 0.37: $\frac{5}{16} = 0.3125$ $\frac{6}{16} = 0.375$ $\frac{7}{16} = 0.4375$

Clearly, $\frac{6}{16}$ is the fraction closest to 0.37. So $12.36 \text{ lb} \approx 12 \text{ lb } 6 \text{ oz}$.

4. Express the measurements as indicated.



a. 5.45 lb = _____ lb _____ oz b. 2.39 ft = _____ ft _____ in c. 10.7 ft = _____ ft _____ in

d. 31.17 lb = _____ lb _____ oz e. 1.2 pt = _____ pt _____ oz f. 0.28 ft = _____ in

g. 0.44 lb = _____ oz h. 0.86 qt = _____ C _____ oz i. 0.43 qt = _____ oz