

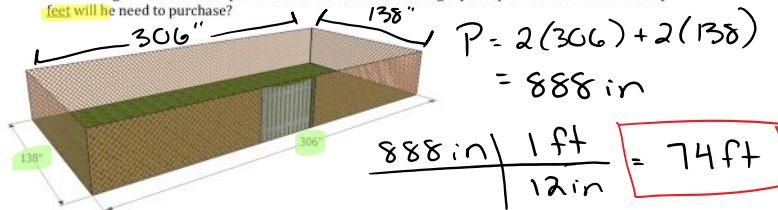
2 Word Problems & 2- Unit Conversions

September 11, 2018 9:12 AM

FMPC10

Updated June 2018

32. Shelby the French Bull Dog needs an outdoor area to run. Ben plans on building her the pen below. The fencing material is sold by the linear foot but his measuring tape only shows inches. How many feet will he need to purchase?

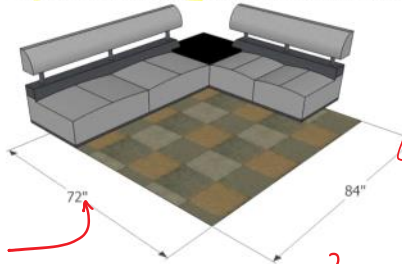


33. Convert your answer above to yards, feet and inches.

$\frac{74 \text{ ft}}{3 \text{ ft}} = 24 \frac{2}{3} \text{ yd}$

$\frac{2 \text{ yd}}{3} = \frac{6}{3} = 2 \text{ ft}$ \therefore there is no fraction, so there are 0 in

34. What are the dimensions of the rectangular carpet below in feet?



means by
 $\rightarrow 72'' \times 84''$

$72'' \times 84''$

$\underline{\quad} \text{ft} \times \underline{\quad} \text{ft}$

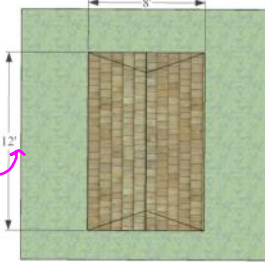
$'' = \text{inches}$

$A^2 = \text{area}$

35. If the carpet is sold for \$4.25 per square foot, what is the cost of carpet required? Include 12% tax.

$A = l \times w$

36. What is the perimeter of the garden shed in yards and feet?



$' = \text{feet}$

37. The shed covers one-third of the area of the yard. How many square feet of sod (grass) are shown in the yard above?

38. Sod-Warehouse sells sod by the roll. Each roll is 1 foot wide and 4 feet long. Each roll sells for \$2.75. what is the cost (including 12% tax) to buy sod for the yard?

Two Unit Conversions (Be comfortable working in fraction form and always reduce.)

You will need to use **TWO conversion factors**. Simply follow the steps for one unit conversions, then repeat.

Eg. Convert 58 inches to yards.

① $58 \text{ inches} \times \frac{1 \text{ foot}}{12 \text{ inches}} = \frac{58}{12} \text{ feet}$

② $\frac{58}{12} \text{ feet} \times \frac{1 \text{ yard}}{3 \text{ feet}} = \frac{58}{36} \text{ yards}$

$= 1 \frac{22}{36} \text{ yards} = 1 \frac{11}{18} \text{ yards}$

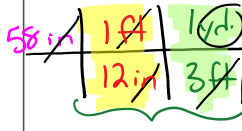
Conversion Factors:

Step ① $\frac{1 \text{ foot}}{12 \text{ inches}}$

Step ② $\frac{1 \text{ yard}}{3 \text{ feet}}$

The unit on top is the one you are converting to!

Set up a table



2 conversion factors

11.61 yd.

$\frac{58}{12} \times \frac{1}{3} = \frac{58}{36} = \frac{29}{18} = 1 \frac{11}{18}$

optional

39. 6025 feet = _____ miles

$6025 \text{ feet} \times \frac{1 \text{ yard}}{3 \text{ feet}} = \frac{6025}{3} \text{ yards}$

$\frac{6025}{3} \text{ yards} \times \frac{1 \text{ mile}}{1760 \text{ yards}} = \frac{6025}{5280} \text{ miles}$

$1 \frac{245}{5280} = 1 \frac{49}{1056} \text{ miles}$

$\frac{6025 \text{ ft}}{1760 \text{ ft/mi}} = 3.423 \text{ mi}$
 $\frac{6025}{1760} = 3.423 \text{ mi}$

40. 123450 feet = _____ miles

41. $2 \frac{1}{2}$ miles = _____ inches.

42. 3.25 yards = _____ inches

43. $15 \frac{2}{3}$ yards = _____ inches

44. $24 \frac{1}{3}$ yards = _____ inches

$\frac{47}{3} \text{ yd} \times \frac{3 \text{ ft}}{1 \text{ yd}} \times \frac{12 \text{ in}}{1 \text{ ft}} = \frac{47 \times 3 \times 12}{3} \text{ inches}$
 $= 564 \text{ inches}$

45. A cabinet maker is using 1"x3" edge grain fir to make some cabinet doors. He purchased $42 \frac{2}{3}$ yards on Craig's list. How many inches did he buy?

Note: I combined both steps into one equation here.

46. Gary is building picture frames to sell in a market. He has 75 yards of material and will make square frames with side lengths of 14 inches. How many frames can he make?

Mr. J's measuring wheel clicks once for every yard it travels. On a walk to school, the wheel clicks 35200 times.

47. How many inches does he walk?

48. How many miles?

49. **A piece of paper is folded in half repeatedly. The paper has a thickness of $\frac{1}{250}$ ". How many yards thick will the paper be after 20 folds?

HW: # 32-49
 Quiz Thursday