The imperial unit to measure an area of land is the acre. During the initial agricultural expansion of the western provinces, the Canadian government offered 160 acres of land free to settlers who were willing to immigrate to Canada. Today, Canada uses the hectare to measure land area:

1 hectare ≐ 2.471 acres

a) How many hectares did each settler receive?

$160\ \text{acr} \times \frac{1\ \text{hec}}{2.471\ \text{acr}} = 64.75\ \text{hec}$

b) One hundred sixty acres is a square with a side length of one-half a mile. How many hectares are in one square mile?

$A = b \times h$

$A = 0.25\ \text{mi}^2$

0.5mi

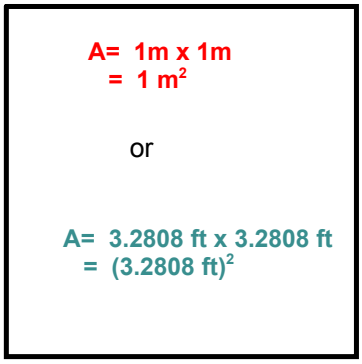
0.5mi

$160\ \text{acr} = 0.25\ \text{mi}^2$

$\times 4 \qquad \times 4$

$640\ \text{acr} \qquad 1\ \text{mi}^2$

$640\ \text{acr} \times \frac{1\ \text{hec}}{2.471\ \text{acr}} = 259\ \text{hec}$



$$(1m)^2 = (3.2808\ ft)^2$$

MUST KNOW use the related CONVERSIONS

Imperial Conversion

1 ft = 12 in

1 yd = 3 ft

1 mi = 1760 yd

Metric Conversions

1 km = 1000 m

1 m = 100 cm

1 cm = 10 mm

Between SI and Imperial

1 m = 1.0936 yd

1 m = 3.2808 ft

1 mi. = 1.6093 km

1 in. = 2.54 cm

HOMEWORK...

Worksheet - Converting Squared and Cubed Units.docx

Questions: 1-10

HOMEWORK SOLUTIONS...

Converting English and Metric

1)	741.61	cubic feet	=	21	cubic meters
2)	13.5	square yards	=	11.29	square meters
3)	26.31	square yards	=	22	square meters
4)	7	feet	=	2.13	meters
5)	17.5	yards	=	16	meters
6)	14.39	cubic yards	=	11	cubic meters
7)	1	feet	=	0.3	meters
8)	10	inches	=	25.4	centimeters
9)	13.73	cubic yards	=	10.5	cubic meters
10)	335.49	cubic feet	=	9.5	cubic meters
11)	13.36	miles	=	21.5	kilometers
12)	17	feet	=	5.18	meters
13)	2.99	square yards	=	2.5	square meters
14)	1.24	square inches	=	8	square centimeters
15)	0.93	square inches	=	6	square centimeters
16)	4.5	yards	=	4.11	meters
17)	2	square feet	=	0.19	square meters
18)	3	cubic feet	=	0.08	cubic meters
19)	16.4	yards	=	15	meters
20)	25	inches	=	63.5	centimeters

Quiz - Converting Measurements

Math-Aids.Com

HOMEWORK SOLUTIONS...

Converting English and Metric

1)	741.61	cubic feet	=	21	cubic meters
2)	13.5	square yards	=	11.29	square meters
3)	26.31	square yards	=	22	square meters
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20)	25	inches	=	63.5	centimeters

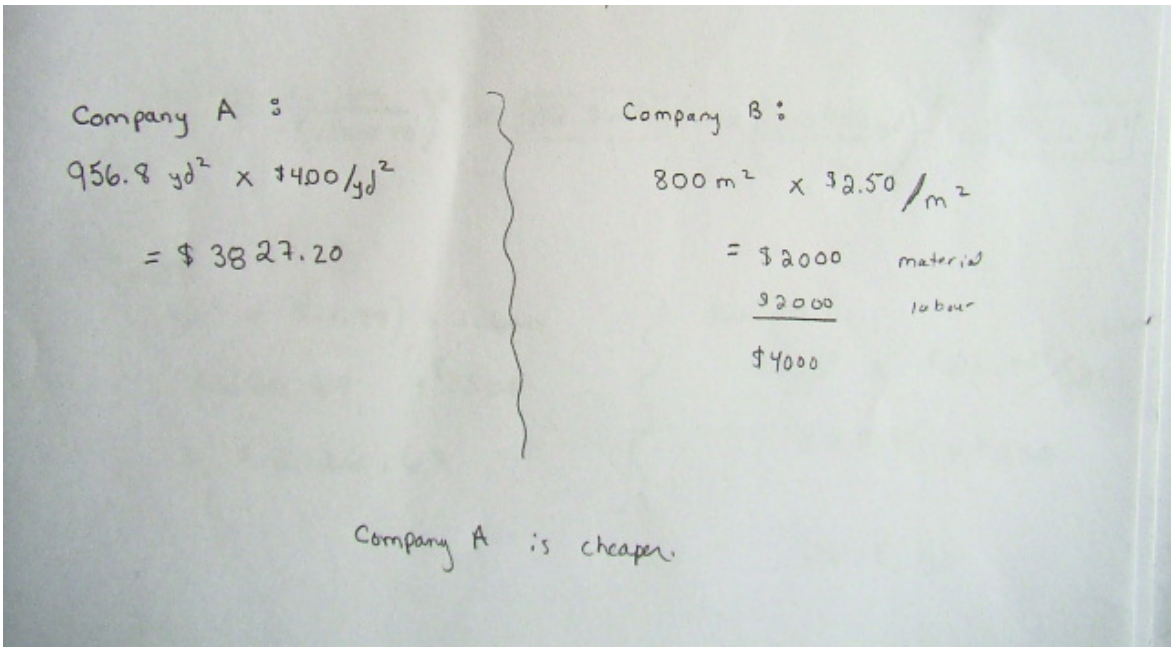
Quiz - Converting Measurements Math-Aids.Com

HOMEWORK...

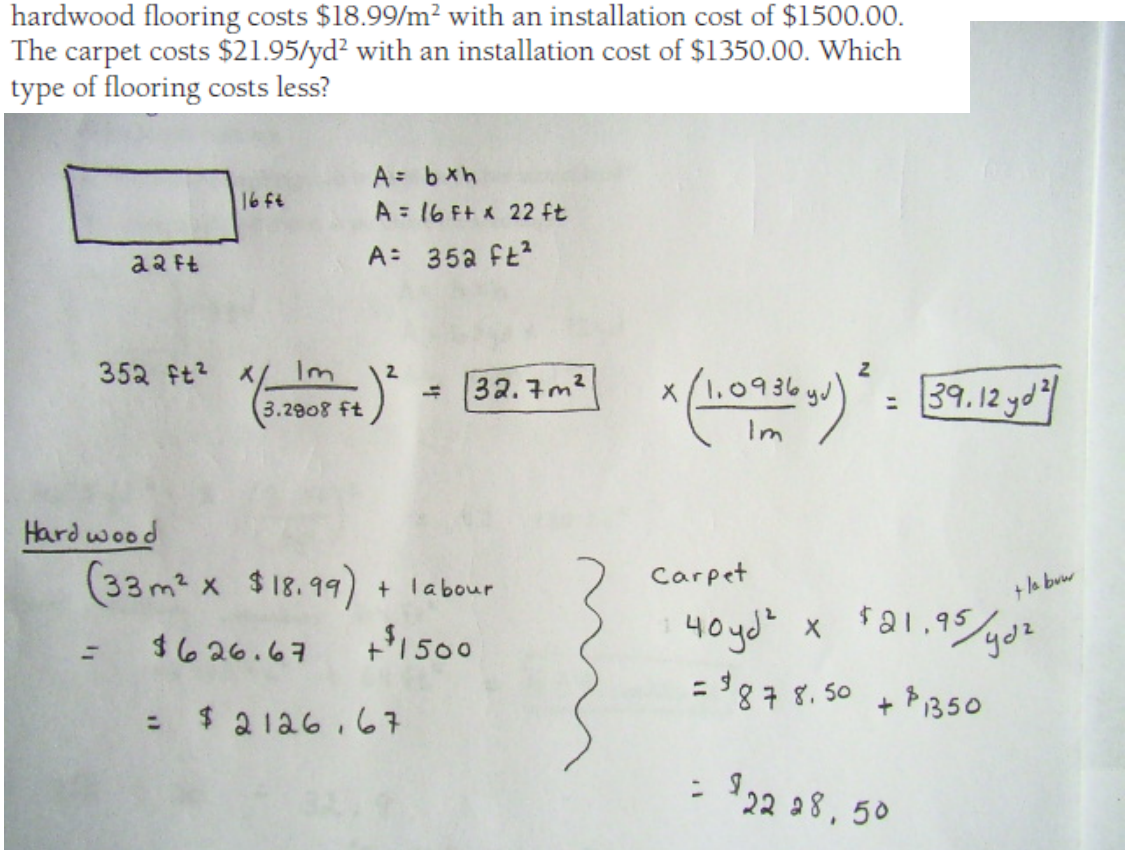
Worksheet - Converting Squared and Cubed Units.docx

Questions: 11-20
page 159: #5, 7, 9

5. Moncton Recreation, Parks and Culture wants to install grass sod on a playground that measures 20 m × 40 m. Two companies have bid on the job. Company A's bid was \$4.00/yd² installed. Company B put in a bid of \$2.50/m² plus \$2000.00 for installation. Which company should get the job based on the best price?



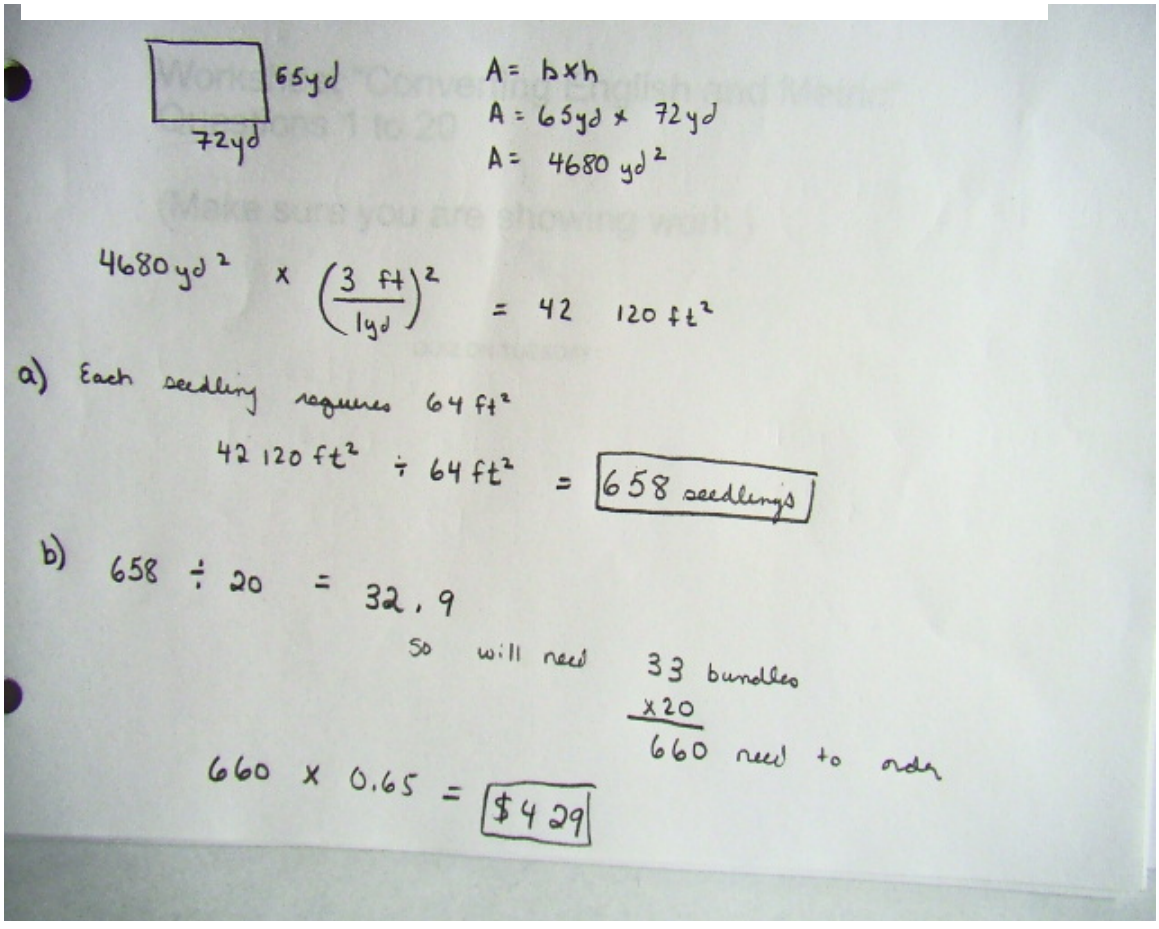
7. Shelley is trying to decide whether to put hardwood flooring or carpet on her living room floor. The dimensions of the room are 22 ft by 16 ft. The hardwood flooring costs \$18.99/m² with an installation cost of \$1500.00. The carpet costs \$21.95/yd² with an installation cost of \$1350.00. Which type of flooring costs less?



9. Irina purchased a farm in the Annapolis Valley of Nova Scotia. She wants to plant balsam fir seedlings, and she estimated the field measures 72 yards by 65 yards. The tree nursery manager told her that each seedling requires an area of 64 ft^2 to grow properly. The seedlings cost $0.65 each. The nursery sells them in bundles of 20, and she cannot order partial bundles.

   a) How many seedlings can Irina plant on her acre of land?

   b) How much will it cost to purchase the seedlings?



Class/ Homework

Worksheet "Converting English and Metric"
Questions 1 to 20

(Make sure you are showing work)

QUIZ ON TUESDAY

Attachments

Worksheet - Converting Squared and Cubed Units.docx