HOMEWORK...Unit Test is TOMORROW!!!

Sample Chapter Test Review - Chp. 4.pdf Review - Chapter 4 Sample Test.pdf

REVIEW...

- Imperial versus metric systems (units, symbols, conversions)
- Converting measurements...

  (metric --> imperial; imperial --> metric, imperial --> imperial)
- Applications of conversions [word problems...draw a picture, identify key details]
- Converting squared and cubed measurements...

  RULE: Square the converter / Cube the converter
- Surface Area [prism, cylinder, pyramid, cone, sphere]
- Surface Area of Composite Objects
- Converting Volumes and Capacities (units, symbols, conversions)

SOLUTIONS...

Review Worksheet - Converting Imp_Metric.docx

Converting English and Metric

1)	8.27	inches	=	21	centimeters
2)	10	mph	=	6.21	kmph
3)	9.01	miles	=	14.5	kilometers
4)	13	gallons	=	49.21	liters
5)	3.17	quarts	=	3	liters
6)	9	cups	=	2.13	liters
7)	9.5	teaspoons	=	46.82	milliliters
8)	19.5	square inches	=	125.81	square centimeters
9)	8	cups	=	1.89	liters
10)	0.21	cubic inches	=	3.5	milliliters
11)	0.46	cubic inches	=	7.5	milliliters
12)	10.5	gallons	=	39.75	liters
13)	16.4	feet	=	5	meters
14)	70.63	cubic feet	=	2	cubic meters
15)	1.22	teaspoons	=	6	milliliters
16)	15.7	cubic yards	=	12	cubic meters
17)	0.16	square inches	=	1	square centimeters
18)	19	yards	=	17.37	meters
19)	20	fluid ounces	=	591.47	milliliters
20)	15	cubic feet	=	0.42	cubic meters

Geometry, Measurement & Finance 10 - MIXED Conversions Math-Aids.Com

ometry, Measurement and Finance 10 Na Key
Quiz - Systems of Measurement & Converting Sept. 2013

/28 16.8 - pass, 22.4 - good, 25.2 - great

Multiple Choice (10 Marks)
CIRCLE the letter that corresponds to the correct solution.

C 1. What is the perimeter of a rectangular room wih a length of 15 feet and a width that is 3feet less than the length?
[A] 27 feet [B] 33 feet [C] 54 feet [D] 66 feet

C 2. How many centimeters is 6'2"?
[A] 29 cm [B] 183 cm [C] 188 cm [D] 74 cm

A 3. How many miles is 8800 yards?
[A] 5 miles [B] 8.8 miles [C] 10 miles [D] none of these

C 4. Convert 250 inches into feet and inches.
[A] 20 feet 6 inches [B] 20 feet 8 inches [C] 20 feet 10 inches [D] 21 feet

B 5. Convert: 66 feet = _____ meters
[A] 5.5 m [B] 20.1 m [C] 26 m [D] 216.5 m

D 6. A 4" by 5" photograph is in a frame $\frac{3}{4}$" wide. What is the outer perimeter of the framed photograph?
[A] 18" [B] 20" [C] 21" [D] 24"

D 7. The driving distance from Miramichi to Moncton is 152 km. What is this distance in miles (to the nearest mile)?
[A] 245 miles [B] 146 miles [C] 101 miles [D] 94 miles

A 8. You decide to visit a fishing buddy in Portland, Maine. He tells you that he lives 435 miles away. Your odometer tells you that you have already travelled 134 km. How much further do you have to go in kilometers?
[A] 566 km [B] 484 km [C] 352 km [D] 136 km

D 9. Convert the following: 20 yd^3 = _____ m^3
[A] 21.9 m^3 [B] 18.3 m^3 [C] 26.2 m^3 [D] 15.3 m^3

D 10. Convert the following: 5450 in^2 = _____ m^2
[A] 351.6 m^2 [B] 183.4 m^2 [C] 21.5 m^2 [D] 3.5 m^2

/10

Open Response (18 Marks)
Show ALL your work in the space provided. Put a box around your final solution and be sure to include units.

1. Make the following unit conversions… [12]

a) 2500 yards = 2.3 km

b) 5 m^2 = 53.8 ft^2

c) 180 cm = 5 ft 11 in

d) 2.8 mi = 4.5 km

e) 65 ft^3 = 2.4 yd^3

f) 1 000 000 mm = 1093.6 yards

/12

2. A room measures 15'6" by 12'3". Carpet costs \$28.95/m^2. If you must purchase 5% extra carpet to account for mistakes and waste, what will it cost to carpet the room? [6]

/6

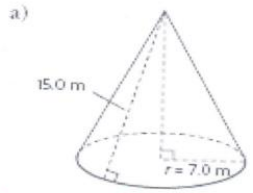
Geometry, Measurement and Finance 10
Quiz – Surface Area

Name: Key

Sept. 2015

1. Find the **SURFACE AREA** for each one of the following… [12]

a)



$SA_{cone} = \pi r^2 + \pi rs$ ①
$= \pi(7)^2 + \pi(7)(15)$
$= 483.8\ m^2$ ①
①

Surface Area = 483.8 m²

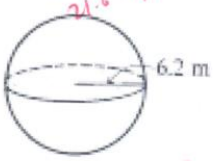
b)

$SA_{cylinder} = 2\pi r^2 + 2\pi rh$ ①
$= 2\pi(6.3)^2 + 2\pi(6.3)(15.8)$ ①
$= 874.8\ cm^2$ ①

Surface Area = 874.8 cm²

c)

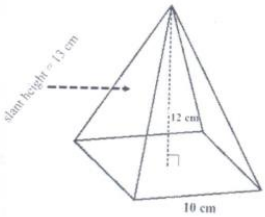
14.4 → pass
19.2 → good
21.6 → great



$SA_{sphere} = 4\pi r^2$ ①
$= 4\pi(6.2)^2$ ①
$= 483.1\ cm^2$ ①

Surface Area = 483.1 cm²

d)

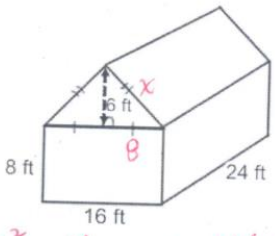


$SA_{pyramid} = s^2 + \frac{4(b)(h)}{2}$
$= 10^2 + \frac{4(10)(13)}{2}$ ①
$= 100 + 260$
$= 360$ ①

Surface Area = 360 cm²

2. Find the **TOTAL SUFRACE AREA** for each of the following figures… [12]

a)



$x^2 = 6^2 + 8^2$
$\sqrt{x^2} = \sqrt{100}$
$x = 10$ ①

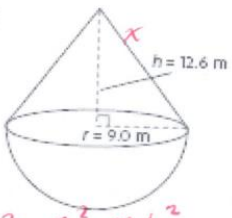
$SA_{t.prism} = 16(24) + 2(8)(16) + 2(8)(24)$ ①
$= 384 + 256 + 384$
$= 1024\ ft^2$ ①

$SA_{t.prism} = \frac{2(16)(6)}{2} + 2(10)(24)$ ①
$= 96 + 480$
$= 576\ ft^2$ ①

$SA_{total} = 1024 + 576$ ①

Surface Area = 1600 ft²

b)



$x^2 = 9^2 + 12.6^2$
$\sqrt{x^2} = \sqrt{239.76}$
$x = 15.5$ ①

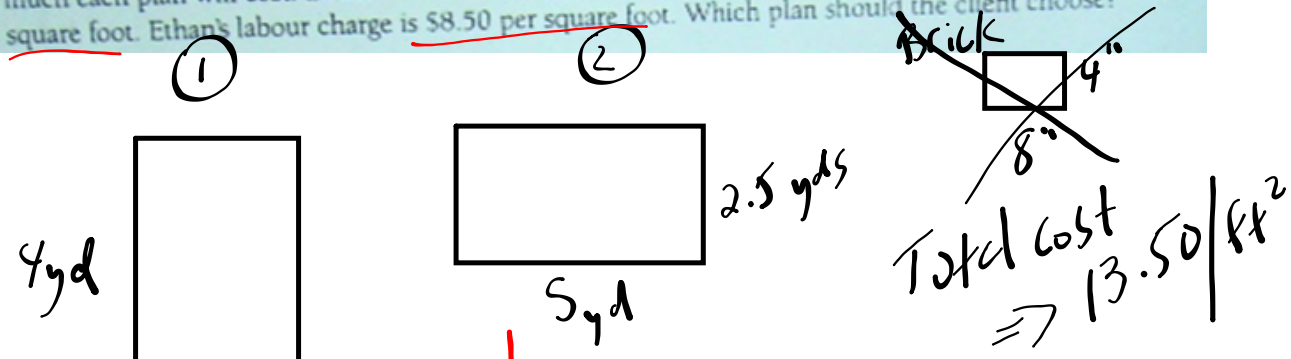
$SA_{cone} = \pi rs$ ①
$= \pi(9)(15.5)$
$= 437.8\ m^2$ ①

$SA_{hemisphere} = \frac{4\pi r^2}{2}$ ①
$= 2\pi(9)^2$ ①
$= 508.9\ m^2$

$SA_{total} = 432.8 + 508.9$
$= 946.7\ m^2$ ①

Surface Area = 946.7 m²

Ethan is writing an estimate for a client who would like a patio built from interlocking bricks. The landscaper has provided two designs that would fit in the yard: Plan 1 is for a patio 3 yards long and 4 yards wide. Plan 2 is for a patio 5 yards long and 2.5 yards wide. The client wants to know how much each plan will cost. Ethan will use rectangular bricks that measure 8" × 4" and cost $5.00 a square foot. Ethan's labour charge is $8.50 per square foot. Which plan should the client choose?



Total cost
$\Rightarrow 13.50/ft^2$

$A = 4 \times 3$

$= 12\ yd^2 \times \frac{3^2\ ft^2}{1\ yd^2}$

$= 108\ ft^2$...

Cost $\Rightarrow 108 \times 13.50$

$1458

BEST

$A = 5 \times 2.5$

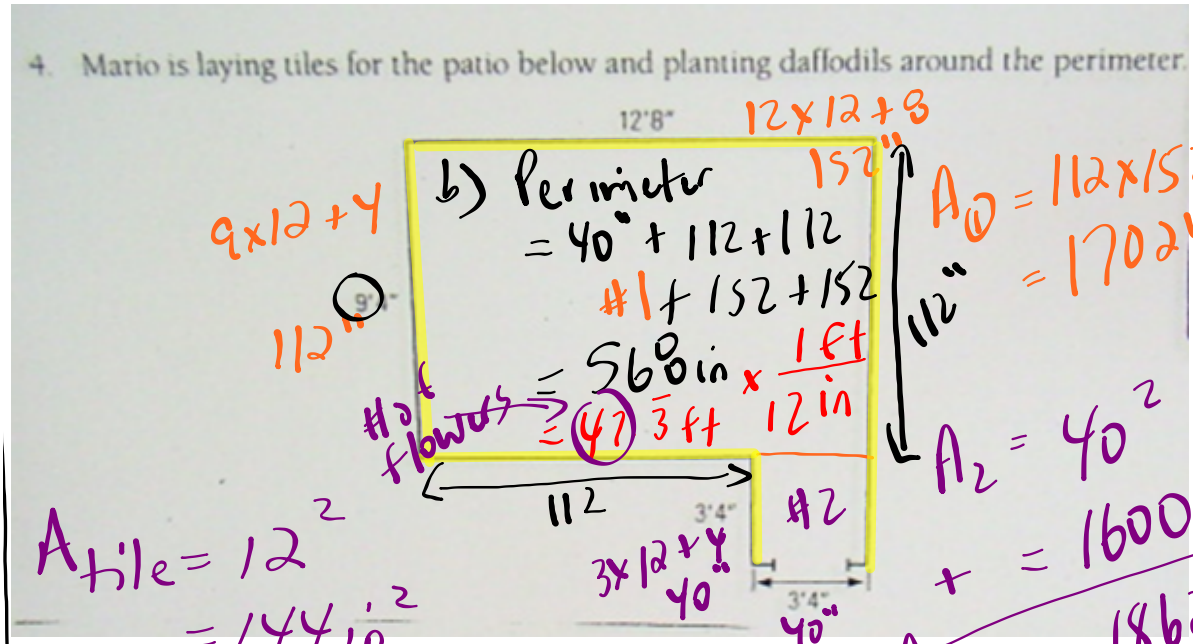
$= 12.5\ yd^2 \times \frac{3^2\ ft^2}{1\ yd^2}$

$= 112.5\ ft^2$

Cost $\Rightarrow 112.5 \times 13.50$.

. $1518.75

4. Mario is laying tiles for the patio below and planting daffodils around the perimeter.



a) Assuming he needs to buy 10% more than the area due to wastage, how many 12" by 12" tiles will he need?

b) How many daffodils will he plant around the perimeter if there are no daffodils along the entrance and he plants them approximately 1 foot apart?

b) Perimeter
$= 40" + 112 + 112 + 152 + 152$
$= 568 \text{ in} \times \frac{1 \text{ ft}}{12 \text{ in}}$
$\approx 47.3 \text{ ft}$

#of flowers $\Rightarrow$ 47

$12 \times 12 + 8 = 152"$

$9 \times 12 + 4 = 112"$

$A_1 = 112 \times 152$
$= 17024 \text{ in}^2$

$A_2 = 40^2$
$= 1600 \text{ in}^2$

$A_{total} \Rightarrow 18624 \text{ in}^2$

$A_{tile} = 12^2$
$= 144 \text{ in}^2$

$3 \times 12 + 4 = 40"$

#1 #2

Waste $\Rightarrow 18624 \times 1.10 = 20486.4 \text{ in}^2$

$\#\text{ of tiles} = \frac{20486.4}{144}$

$= 143 \text{ tiles}$

Attachments

Review - Chapter 4 Sample Test.pdf

Review - Chp. 4.pdf

Review Worksheet - Converting Imp_Metric.docx