IB Math Studies 2 BELL WORK

Calculate $3.7 \times 16.2^2 - 500$, writing your answer

(a) correct to two decimal places;

(b) (i) correct to three significant figures;

(ii) in the form $a \times 10^k$, where $1 \leq a < 10$, $k \in \mathbb{Z}$

$3.7 \times 16.2^2 - 500$

$3.7 \times 262.44 - 500$

$971.028 - 500$

$= 471.03$

471

ii 4.71×10^2

Questions on the assignment?

Exercises:

13 G.1 # 2, 3, 4, 5 - all a-c
13 G.3 # 2, 3, 4
13 H.1 # 1 a-b, 2 a-b
13 H.2 # 2, 3, 6
13 I # 3, 4, 5

$y = mx + b$

⊥ bisectors:
find midpoint (x y)
find neg recip slope
m

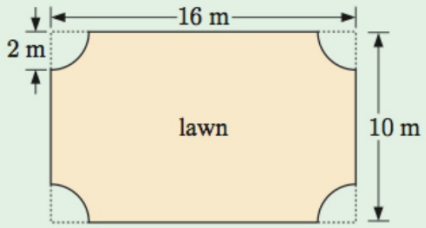
Chapter 14

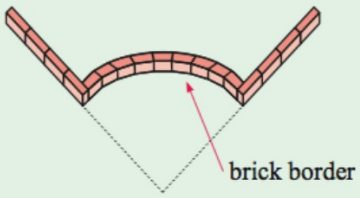
Perimeter, area, and volume

Syllabus reference: 1.4, 5.5

OPENING PROBLEM — BRICK EDGING

You are asked to quote on the supply and installation of bricks around a lawn. The bricks are expensive and are not returnable. Consequently, you need to accurately calculate how many are needed and what they will cost. You draw a rough sketch of what the house owner wants. You take it back to your office to do the calculations. The brick supplier tells you that each brick is 220 mm long and costs $4.70.





Things to think about:

a How far is it around the lawn?

b How many bricks will you need?

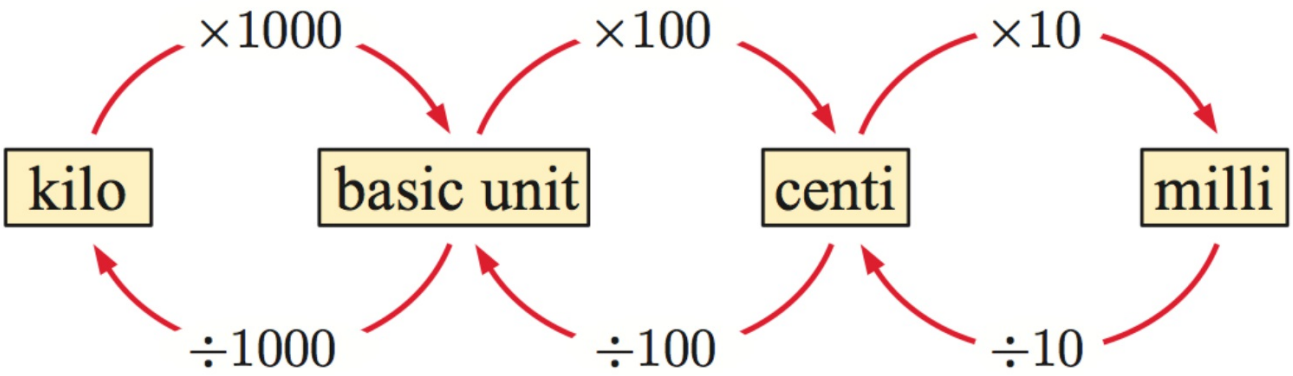
c What will be the cost of the bricks needed to do the job?

THE METRIC SYSTEM - International System of Units (SI)

Base unit	*Abbreviation*	*Used for measuring*
metre	m	length
kilogram	kg	mass
second	s	time

Unit	*Abbreviation*	*Used for measuring*
litre	L	capacity
tonne	t	heavy masses
square metre	m^2	area
cubic metre	m^3	volume
metres per second	$m\,s^{-1}$	speed
newton	N	force
joule	J	energy
watt	W	power

A CONVERSION OF UNITS



** This much, you must have memorized! **

MASS CONVERSIONS

$$1\ \text{t} = 1000\ \text{kg}$$
$$1\ \text{kg} = 1000\ \text{g}$$
$$1\ \text{g} = 1000\ \text{mg}$$

$1\ cm^3 = 1\ mL$

Convert:

a 2.3 kg to grams

b 8 470 000 g to tonnes

2300 g

8.47 t

Now you try it:
Approximate, in appropriate *metric* units, the following:

1) A pencil 25 cm
2) Your height 150 cm
3) The width of the classroom
4) The width of your desk
5) The capacity of your backpack

Now you try it:
Estimate, in appropriate *metric* units, the following:

1) The distance from this classroom to the grocery store
2) Your weight
3) The weight of a pencil
4) The capacity of a standard water bottle

TOK Connection …

Why does the USA use imperial standard units (inches, miles, ounces, pounds) instead of metric units of measure?

Share your thoughts with a neighbor and be prepared to share with the class.

Map of countries officially not using the metric system

http://www.zmescience.com/other/map-of-countries-officially-not-using-the-metric-system/

B PERIMETER

PERIMETER

The **perimeter** of a figure is the distance around its boundary.

For a **polygon**, the perimeter is obtained by adding the lengths of all of its sides.

For a **circle**, the perimeter has a special name, the **circumference**.

Assignment, from the book:

Exercises:

14A # 3, 4, 6

14B # 4, 6, 9