Name: _____   Date: _____

Lesson 2.1 – Areas of Composite Shapes

Definitions:

- <u>Perimeter</u>: The distance around a closed figure: Possible Units: $m, in, cm.$

- <u>Area</u>: The number of square units needed to cover a surface   Possible Units: m^2 in^2

$cm^2.$

Example: Find the area and perimeter of each shape:
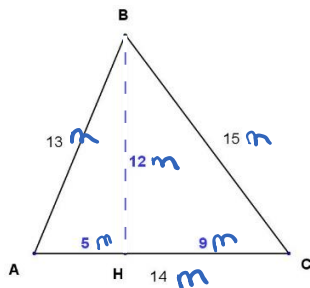
$A = \dfrac{bh}{2}$

$= \dfrac{14 \times 12}{2}$

$= \dfrac{168}{2}$

$= 84 m^2$

$P = 13m + 15m + 14m$

$= 42.m$

(triangle diagram with B at top, A and C at bottom, H on base; labels 13 m, 15 m, 12 m, 5 m, 9 m, 14 m)

(circle with $r = 14\ m$)

$A = \pi r^2$

$= \pi (14)^2$
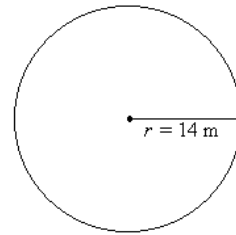
$= 615.75 m^2$

For a circle,
Perimeter = Circumference.

$C = 2\pi r$
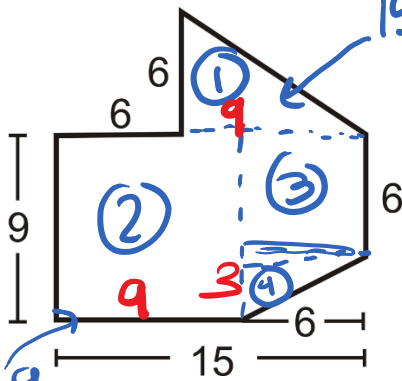
$= 2\pi (14)$

$= 87.96\ m.$

Practice: Find the areas of the following shapes   (Use the π button on your calculator)
- a) A rectangle measuring 5 cm by 12 cm
- b) A square with side lengths 6 cm
- c) A parallelogram with base 3 cm and height 2 cm

MAP4C   **Raina**

Can we find the area of this shape?

$15 - 6 = 9$

$* $ All measures in m.

This is called a composite figure!

6 ①
6
9 (red)

②   ③
9

6

9 (red) 3 ④

$15 - 6 = 9$

9 (red)

6

15

$$A_1 = \frac{b \times h}{2}$$
$$= \frac{9 \times 6}{2}$$
$$= 27 \, m^2$$

$$A_2 = L \times w$$
$$= 9 \times 9$$
$$= 81 \, m^2$$

$$A_3 = L \times w$$
$$= 6 \times 6$$
$$= 36 \, m^2$$

$$A_4 = \frac{b \times h}{2}$$
$$= \frac{6 \times 3}{2}$$
$$= 9 \, m^2$$

$$Total = A_1 + A_2 + A_3 + A_4$$
$$= 27 \, m^2 + 81 \, m^2 + 36 \, m^2 + 9 \, m^2$$
$$= 153 \, m^2$$