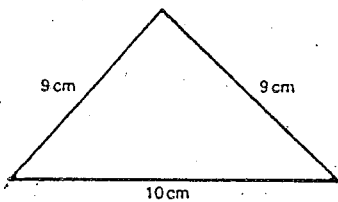


Worksheet 1 - AREA + PERIMETER

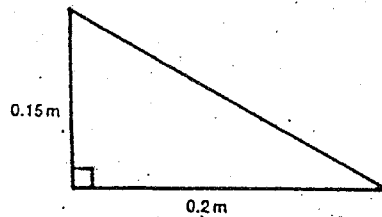
①

Find the perimeters of these triangles:

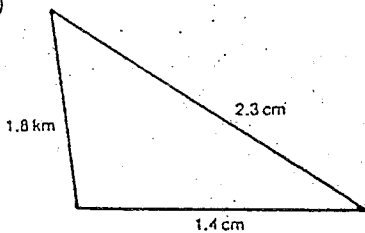
(a)



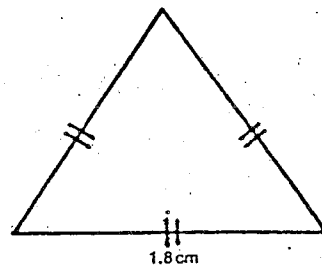
(c)



(b)



(d)

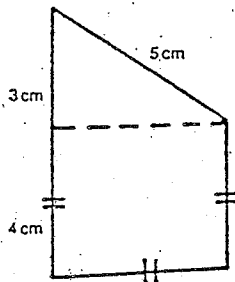


②

(i) Find the perimeters of these figures:

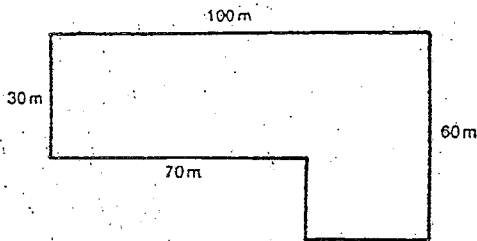
(ii) What are their areas?

(a)



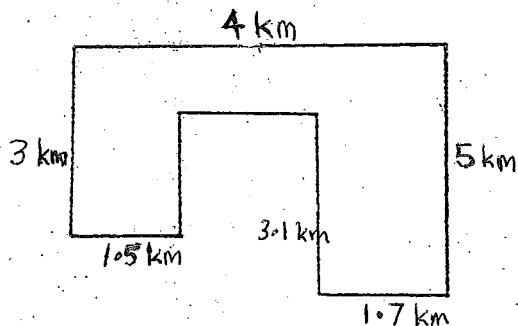
$P =$ _____ $A =$ _____

(b)



$P =$ _____ $A =$ _____

(c)



$P =$ _____ $A =$ _____

ANSWERS

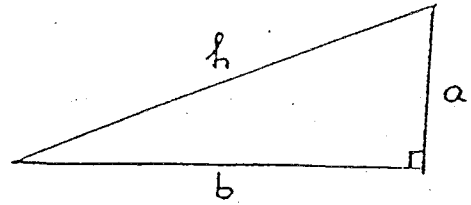
① (a) 28 cm (b) 5.5 km (c) 0.6 m (d) 5.4 cm

② (a) $P = 20 \text{ cm}$ $A = 22 \text{ cm}^2$ (b) $P = 320 \text{ m}$ $A = 3900 \text{ m}^2$ (c) $P = 20.2 \text{ km}$ $A = 14.52 \text{ km}^2$

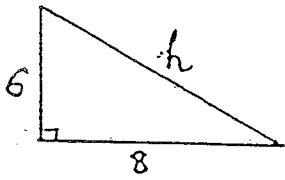
PYTHAGORAS

Worksheet 2

In a right angle triangle, the side opposite the 90° is called the "hypotenuse"
Call it "h" then: $h^2 = a^2 + b^2$



Example 1: (- Find hypotenuse)

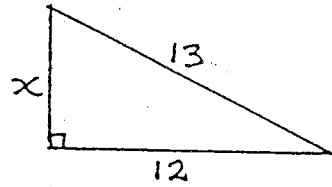


$$h^2 = 6^2 + 8^2$$

$$h^2 = 100$$

$$h = 10$$

Example 2: (- find short side)



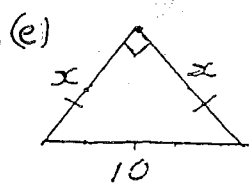
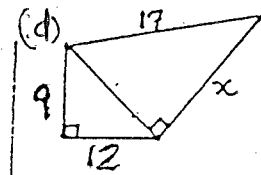
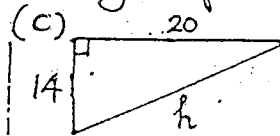
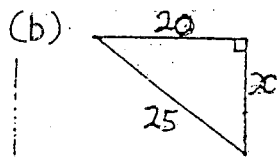
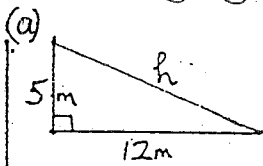
$$13^2 = x^2 + 12^2$$

$$\therefore x^2 = 13^2 - 12^2$$

$$x^2 = 25$$

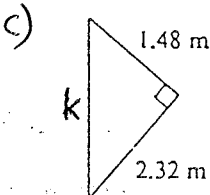
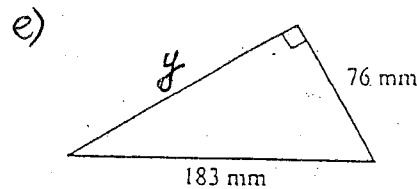
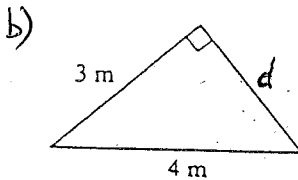
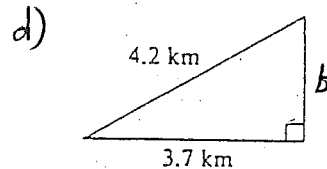
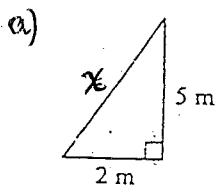
$$x = 5$$

3 Use Pythagoras' Rule to find the lengths of sides marked x or h :-



4 Exercises

Evaluate the pronumerals in the following:



ANSWERS

- 3 a) $h = 13$
 b) $x = 15$
 c) $h \approx 24.4$
 d) $x = 8$
 e) $x = 5\sqrt{2}$
 ≈ 7.07

- 4 a) $x \approx 5.39$
 b) $d \approx 2.65$
 c) $k \approx 2.75$
 d) $b \approx 1.99$
 e) $y \approx 166.5$
 f) $d \approx 7.65m$

g) $S = 17.45mm$

h) $d \approx 1183.7mm$

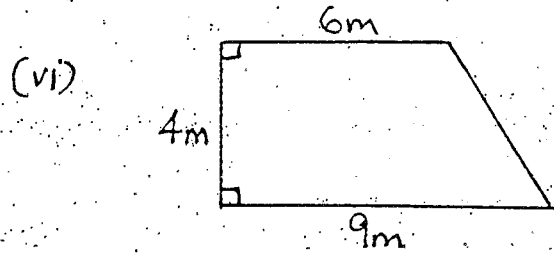
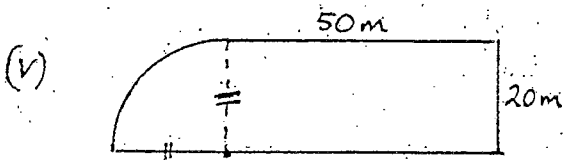
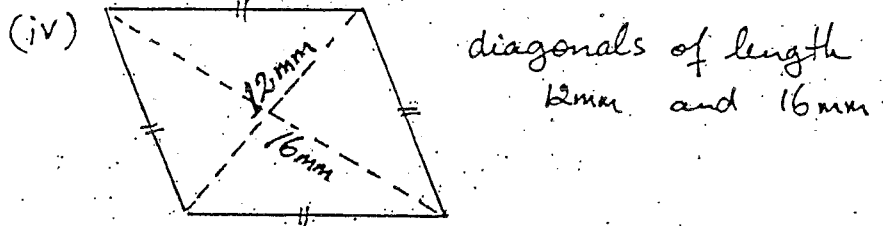
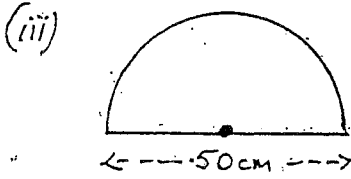
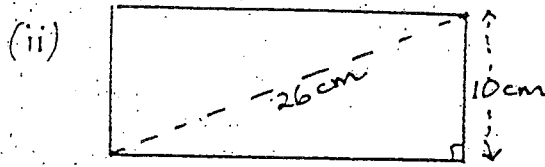
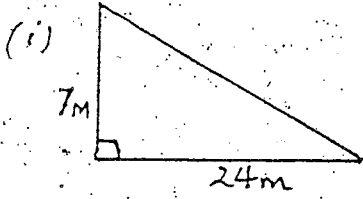
f) A rectangle has sides of 4.38 m and 6.27 m. Find the length of the diagonal.

g) A rectangle has one side of length 27.3 mm and a diagonal length of 32.4 mm. Find the length of the other side.

h) Find the length of the diagonal of a square that has sides of length 837 mm.

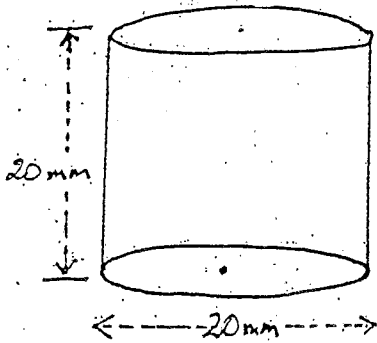
AREAS & VOLUMES - Worksheet 3

Quest 1 Find (a) the Area & (b) The Perimeter of.....

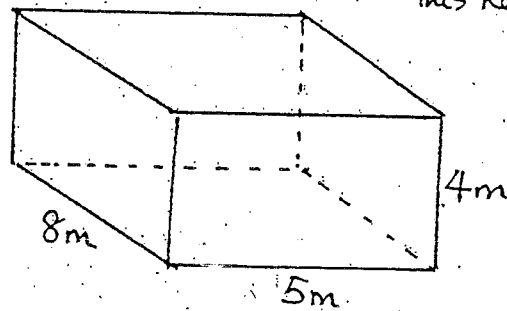


Quest 2

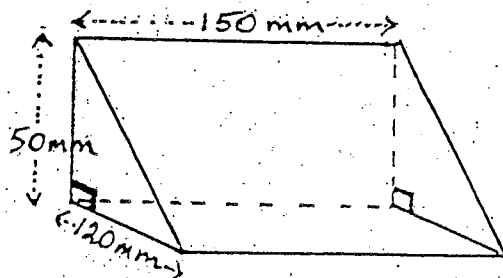
(a) Find the Volume of this Cylinder



(b) Find the Total Surface Area of this Rectangular Prism:

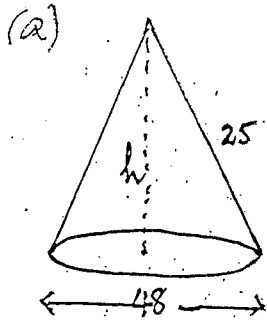


(c) Find (i) the volume
(ii) total Surface Area of the Triangular Prism :-



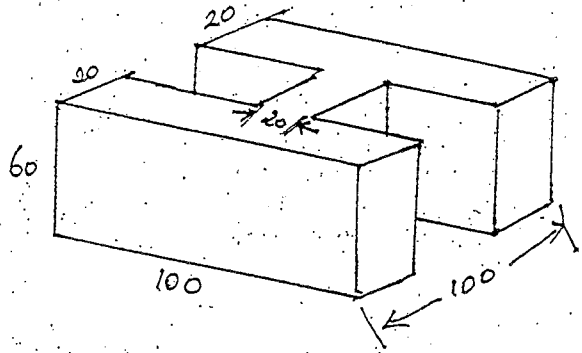
Question 3

Find the Volume: (all units are mm)



[Hint: find h first]

(b)



(c) Find the surface Area in figure (b) ↑

d) Challenge: - find the surface area in 3(a) **

Q1

ANSWERS

(i) $A = 84 \text{ m}^2$ (ii) $A = 240 \text{ cm}^2$ (iii) $A = 312.57 \text{ cm}^3$ (iv) $A = 96 \text{ mm}^2$
 $P = 56 \text{ m}$ $P = 68 \text{ cm}$ $P = 25\pi + 50 \text{ cm}$ $P = 40 \text{ mm}$

(v) $A = 100\pi + 1000 \text{ m}^2$ (vi) $A = 30 \text{ m}^2$
 $P = 10\pi + 1040 \text{ m}$ $P = 24 \text{ m}$

Q3 a) $V = 1344\pi \text{ mm}^3$ b) $V = 312 \text{ cm}^3$
 c) $SA = 44000 \text{ mm}^2$ d) $SA = 1176\pi \text{ m}^2$

Q2 (a) $V = 2000\pi \text{ mm}^3$

(b) $SA = 184 \text{ m}^2$

(c) (i) $V = 450000 \text{ mm}^3 = 450 \text{ cm}^3$

(ii) $SA = 51000 \text{ mm}^2 = 510 \text{ cm}^2$