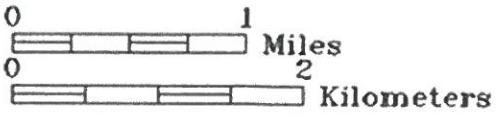
N1: MAPS, PLANS AND OTHER REPRESENTATIONS OF THE PHYSICAL WORLD

Scale

From the paper to real life:	• If the length on the map is given in cm or mm and the length is asked in m or km: multiply the given length with the scale • Your answer is in the given unit. • Convert to the unit asked.
From real life to the paper	• If the real distance is given and the length on the map is asked: divide the given distance with the scale • Your answer is in the given unit • Convert to the unit asked.
To determine the scale	• If the real distance and the distance on the map are given: make sure that the units are the same (convert to the smaller unit) • Then divide!!
Bar scale is a scale that you can see in a block	

The distance on the map is 2cm and the real distance is 20m

2cm : 20m

2cm : 2000cm

DIVIDE BOTH SIDES BY 2

1cm : 1000cm

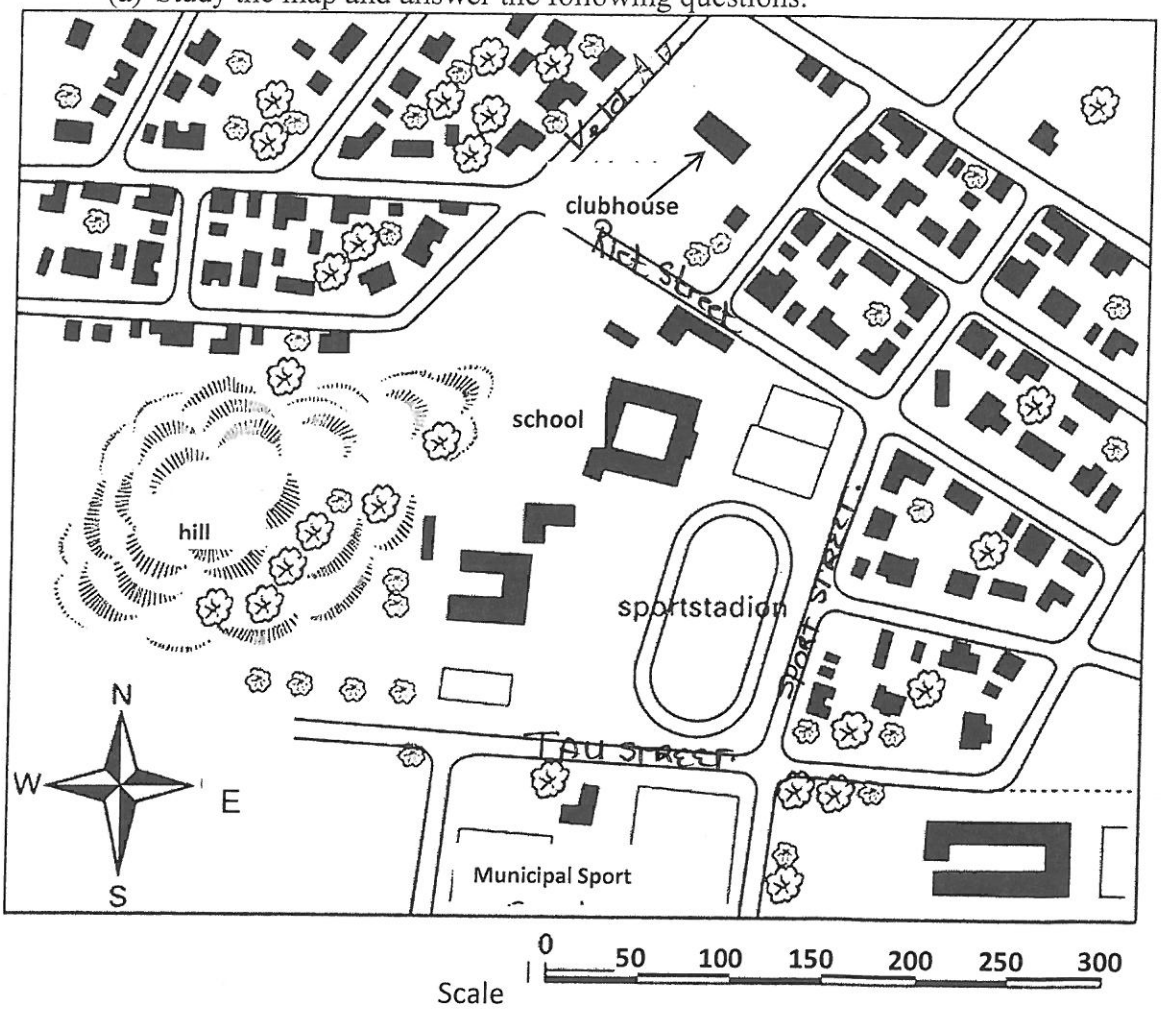
Thus the scale is

1:1 000

Conversions of feet, mile, pounds, and exchange rates work the same!

N1: Worksheet 1: Scale Drawings

(a) Study the map and answer the following questions:



i. Write directions to indicate the way from the Clubhouse to the Municipal sport grounds. Write your own street names on the map.

ii. What is the distance around the field track at the sport stadium? (Use a thread to measure it)

iii. Relative to the clubhouse, in which direction is the hill?

iv. Calculate the area of the clubhouse, indicated by the rectangle.

i. Turn left into Vdd Av. Continue to Riet Street. Turn left. Continue to Sport Street. Turn right. Turn right again into Tau Street. The Municipal sport grounds will be on your left hand side.

ii Measured: 7cm Bar Scale: 300m.

iii South West.

iv. Measured: ℓ = 12mm b = 4mm

12 mm : 50m

12mm : 50 000 mm

Scale: 1 : 4167

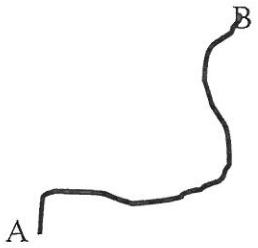
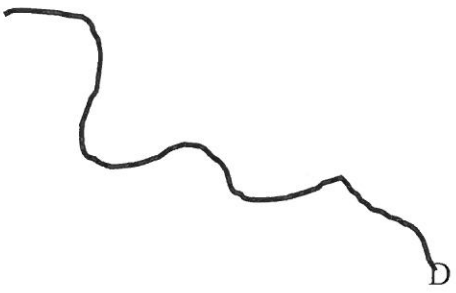
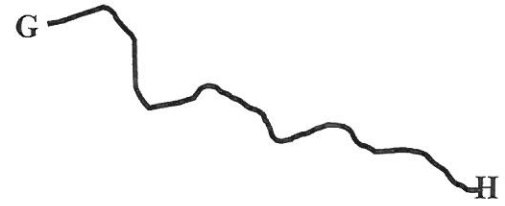
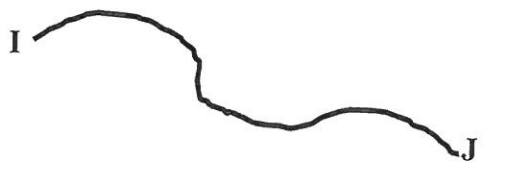
Area: $\ell \times b$

$= 7 \times 4167 \times 4 \times 4167$

$= 486\,188\,892\ mm^2$

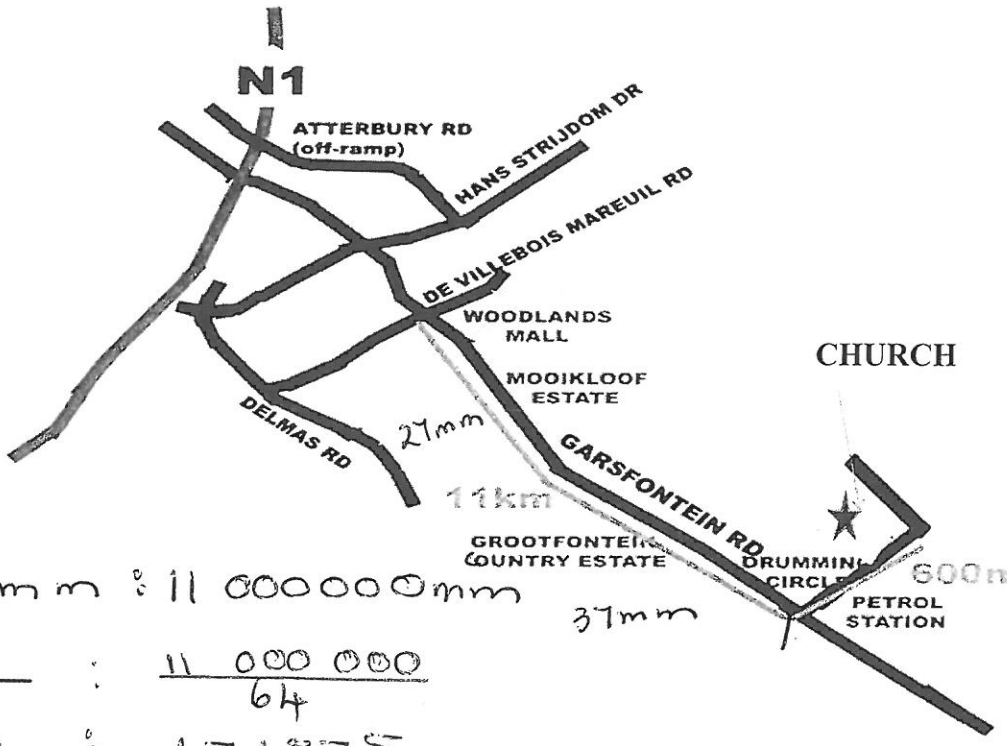
$= 486,2\ m^2$

(b) Complete the table: Determine the real distances (as the crow flies):

 Scale: 1: 20 000 000	Measure: 4cm ∴ 4 x 20 000 000 = 80 000 000cm = 800 km.
C  Scale: 1 : 30 000	Measure: 67mm ∴ 67 x 30 000mm = 2010000 mm = 2,01km.
∴ 6,5 x 8333333 cm = 54166664cm = 542km F or $\frac{65}{24}$ x 200 = 542 km E Bar scale 200km	Measure 6,5cm 24mm : 200 km 24mm : 200 000 000 1 : 200 000 000 ÷ 24 1 : 8333333
1 : 10 000 000 G  This distance is 600km as the crow flies	**Determine the scale:** 6,3cm : 600 km 6,3cm : 60000000cm $\frac{6,3}{6,3}$: $\frac{60000000}{6,3}$ 1 : 9523809 Round.
 This distance is 200 m (as the crow flies)	**Determine the scale:** 59mm : 200 m 59mm : 200 000mm $\frac{59}{59}$: $\frac{200000}{59}$ 1 : 3389

Worksheet 2: Various Maps

(a) Study the map and answer the questions below:



64mm : 11 000 000mm

$\frac{64}{64} : \frac{11\,000\,000}{64}$

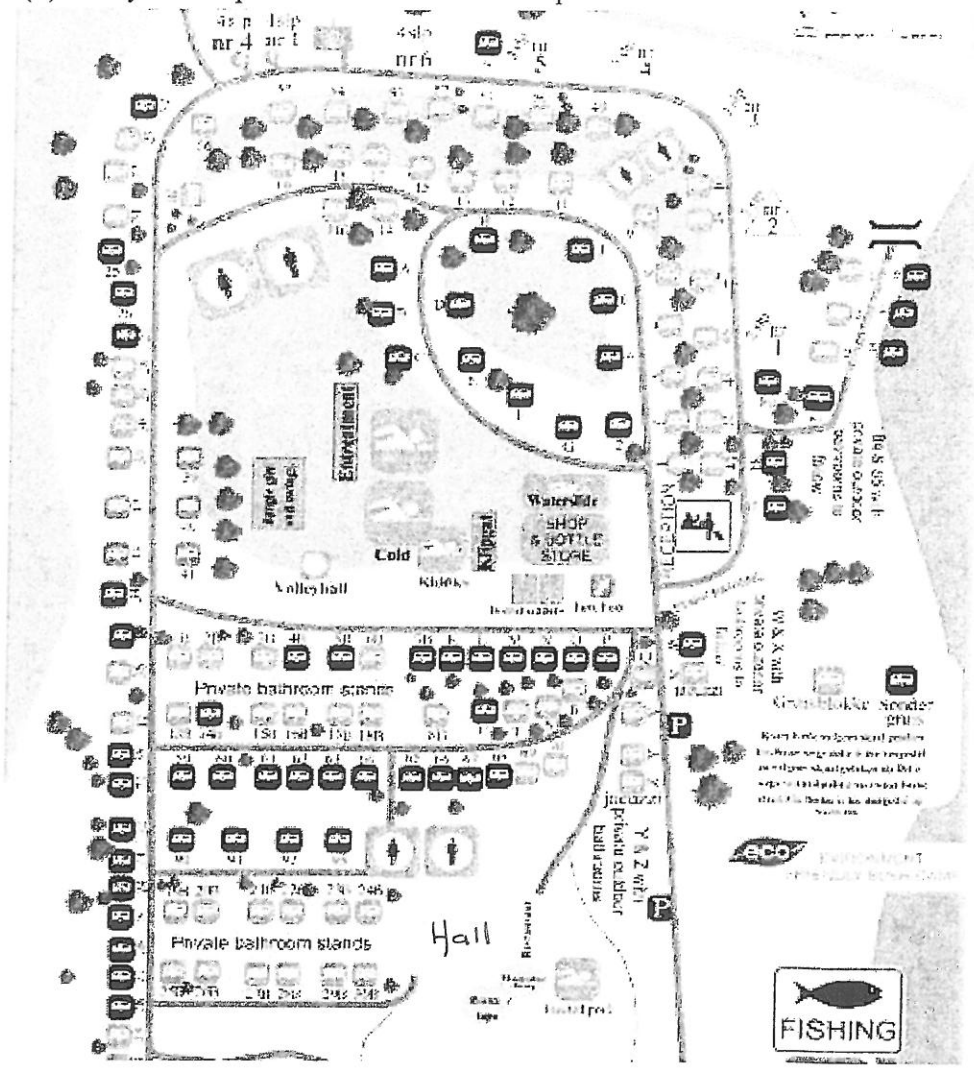
1 : 171 875

i. Determine the scale of this map. 27 + 37mm = 64mm : 11 km

ii. Give directions to the church from the Atterbury Road off-ramp.

From the off-ramp, drive to T junction with Hans Strijdom. Turn right to Garsfontein rd. Drive straight, pass De Villebois Mareuil rd. You will see Woodlands mall on your left-hand side. Drive 11km and you will find the drumming circle on your left handside. Turn left. Drive 600m. Turn left again. Church is on your left hand side.

(b) Study the map below and answer the questions:



i. Name the activities of this camping site.

ii. How many ablution blocks are there?

iii. Write down the directions from the reception to the hall.

iv. Calculate an appropriate scale for this map.

v. Write down in your own opinion the pros and cons of camping.

i. Swimming, fishing, walking, volleyball & cycling.

ii 6

iii At the reception, turn left. First road right and then left again. Where the road split, keep left. Continue till you find the Hall

iv A caravan = 3mm
Real life 3 m
∴ 3mm : 3m
3 : 300 ⓪
1 : 1000

v. Pros
Outdoor
Fresh Air
Inexpensive.
Meet people.
Close to nature

Cons.
Not as convenient
When it rains, everything get wet