Scales and Conversions - A

Two maps are drawn of a play park and a garage using the Scale 1:200 and 1:50
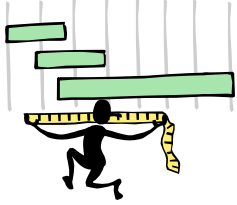
Here are some measurements and real life sizes of objects on the plans.
Fill in the boxes to complete the table:

Scale 1:200 (every 1cm on map = 200cm in real life size)

	DRAWING SIZE	REAL LIFE SIZE
Slide	1.7cm	
Table	0.8cm	
Bench		1.2m
Flower bed	1.1cm	
Youth club building	7.5cm	
Football pitch		8.9m
Soft play area	4.2cm	
Running track		12m
Swings	1.4cm	
Roundabout	2.3cm	

Scale 1:50 (every 1cm on plan = 50cm in real life size)

OBJECT	DRAWING SIZE	REAL LIFE SIZE
Car ramp 1	5.7cm	
Office	15cm	
Work Bench		1.2m
Car ramp 2	1.1cm	
Tyre Area	6.5cm	
MOT Area		5.9m

Scales and Conversions – B

1. A map scale is 1:1500
   If the distance on the map is 500cm, **what is the actual distance?**

2.

   | A | | B |

   A-B measures 16cm and the scale is 4:4000.
   What is the total length **in metres**?

3. A man walks 1500 metres.
   On a map this is shown as 3cm.
   What is the scale on the map?

4. The flowing distances were recorded for a sponsored walk:

NAME	DISTANCE	TIME hrs
J Knowes	2200m	2.5
P Lokin	1600m	2.1
R Fotergill	1400m	2.3
P Willid	2900m	2.5
N Moilk	2400m	2.6

   What is the total distance walked in kilometres?

MSS1/L2.10 Work out dimensions from scale drawings. Understand (a) scale written as a ratio (b) scale is independent of units, when expressed as a ratio.

Scales and Conversions
Answers A

(1:200)	DRAWING SIZE	REAL LIFE SIZE
Slide	1.7cm	340cm (3.4m)
Table	0.8cm	160cm (1.6m)
Bench	0.6cm	1.2m
Flower bed	1.1cm	220cm (2.2m)
Youth club building	7.5cm	1500cm (15m)
Football pitch	4.45cm	8.9m
Soft play area	4.2cm	840cm (8.4m)
Running track	6cm	12m
Swings	1.4cm	280cm (2.8m)
Roundabout	2.3cm	460cm (4.6m)

(1:50)	DRAWING SIZE	REAL LIFE SIZE
Car ramp 1	5.7cm	285cm (2.85m)
Office	15cm	750cm (7.5m)
Work Bench	2.4cm	1.2m
Car ramp 2	1.1cm	55cm (0.55m)
Tyre Area	6.5cm	325cm (3.25m)
MOT Area	11.8cm	5.9m

Answers B

1. 500cm x 1500 = 750 000 m = 7500m = 7.5km

2. 4:4000 = 1:1000
   16cm x 1000 = 16 000cm = 160m

3. 3cm represents 1500m
   So 1cm represents 500m (or 1cm represents 50 000 cm)
   So scale of map = 1: 50 000

4. Total distance = 2200m + 1600m + 1400m + 2900m + 2400m = 10 500m
   10 500m = 10.5km

MSS1/L2.10 Work out dimensions from scale drawings. Understand (a) scale written as a ratio (b) scale is independent of units, when expressed as a ratio.