Measurement

A. Measurement: Surface area of solids

Find the total surface area of these solids:

1

2
2 m

8 m

3
3. 8 m

4 m   5 m

12 m

6 m
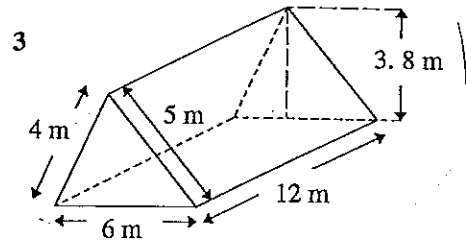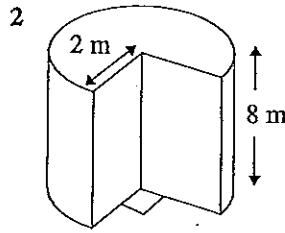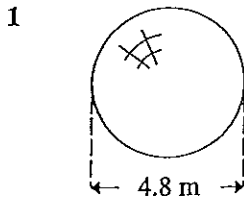
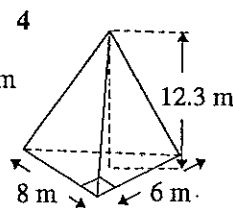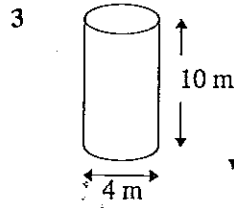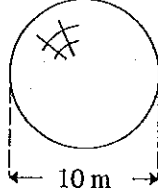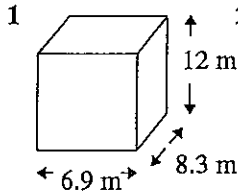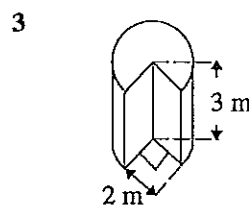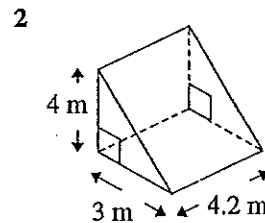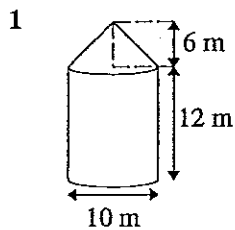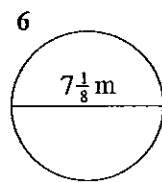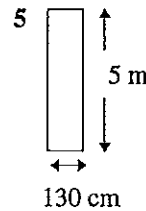## B. Measurement: Volume of solids

Find the volume of these solids:

1
12 m

6.9 m   8.3 m

2
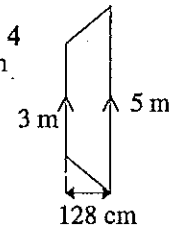10 m

3
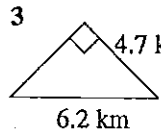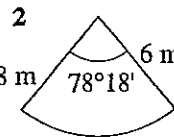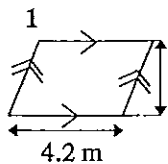10 m

4 m

4
12.3 m

8 m   6 m

5
11 m

9 m
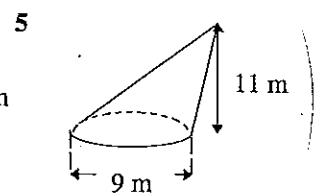
C. Measurement: Drawing accurate nets of solids

What nets are required to make these solids:
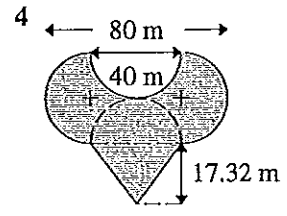
1
6 m

12 m

10 m

2
4 m

3 m   4.2 m

3
3 m
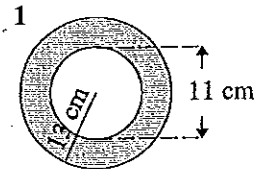
2 m

D. Measurement: Area of simple shapes

Find the area of these shapes:

1
1.8 m

4.2 m

2
6 m

78°18'

3
4.7 km

6.2 km

4
3 m   5 m

128 cm

5
5 m

130 cm

6
$7\frac{1}{8}$ m

E. Measurement: Composite areas

Find the shaded area:

1
11 cm

13 cm

2
4 m

6.8 m

6.3 m   1.2 m

3
32 m

46 m

12 m

78 m

4
80 m

40 m

17.32 m
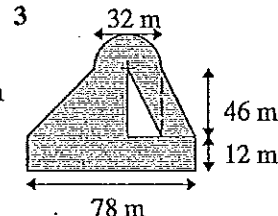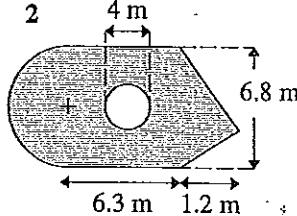
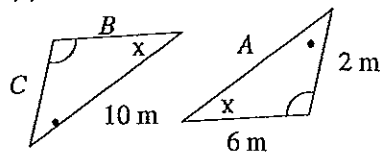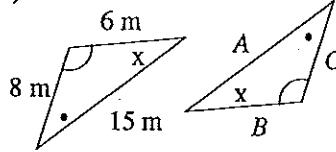## F. Measurement: Similar and congruent triangles

1 Find the missing lengths in these congruent triangles:

(a)
B
x
C
10 m

A
2 m
x
6 m
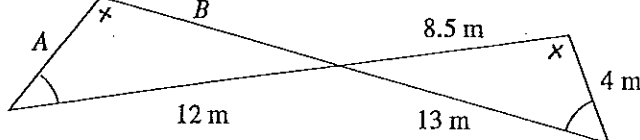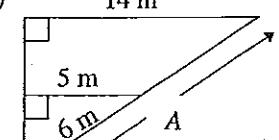
(b)
6 m
x
8 m
15 m

A
C
x
B

(c)
10 m   11 m
x
12 m

C
B
x
A

2 Find the missing lengths:

(a)
A
B
8.5 m
x
4 m
12 m   13 m

(b)
14 m
5 m
6 m
A
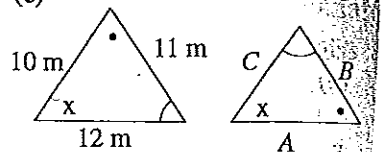
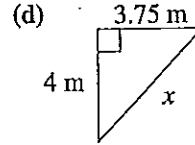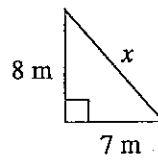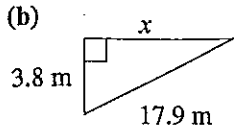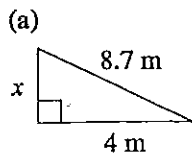**G Measurement: Pythagoras' theorem in two dimensions**

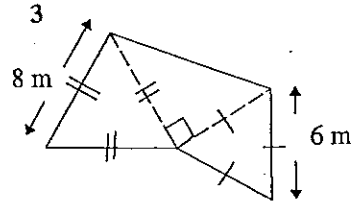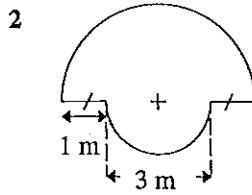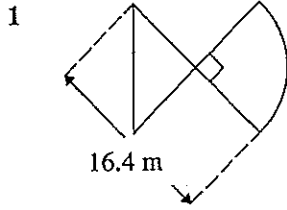1 Find the missing lengths to two decimal places:

(a)

8.7 m

x

4 m

(b)

x

3.8 m

17.9 m

(c)

8 m

x

7 m

(d)

3.75 m

4 m

x

2 Find the side length of the largest square to fit inside a circle with radius 6 cm.

H Measurement: Perimeter

Find the perimeter of:

1

16.4 m

2

1 m

3 m

3

8 m

6 m

A 1 72.38 m²   2 126.25 m²   3 202.8 m²
B 1 687.24 m³   2 523.6 m³   3 125.7 m³
    4 98.4 m³   5 233.3 m³

C 1

2

3
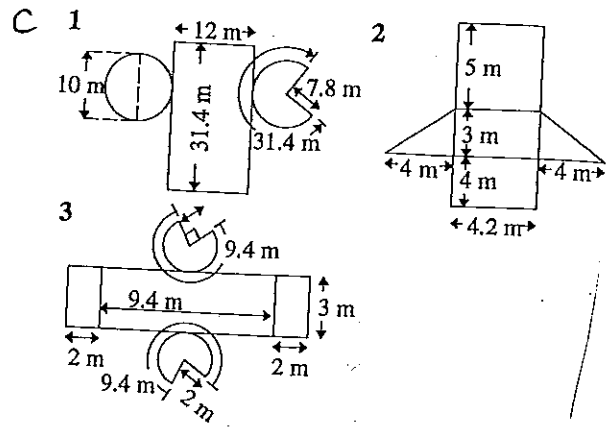
D 1 7.56 m²   2 24.60 m²   3 9.635 km²
    4 5.12 m²   5 6.5 m²   6 39.87 m²
E 1 435.90 cm²   2 52.51 m²   3 3500.12 m²
    4 2574.72 m²

F 1 (a) $A = 10$ m (b) $A = 15$ m (c) $A = 10$ m
            $B = 6$ m $B = 6$ m $B = 11$ m
            $C = 2$ m $C = 8$ m $C = 12$ m
    2 $A = 3.69$ m   (a) $A = 16.8$ m
       $B = 7.85$ m

G 1 (a) 7.73 m   (b) 17.49 m
       (c) 10.63 m   (d) 5.48 m
    2 8.49 cm
H 1 57.28 m   2 14.57 m   3 38 m