

FINAL EXAM REVIEW #5



NUMBER THEORY

ALGEBRA

GEOMETRY LINES AND ANGLES

MEASUREMENT

INTEGERS, POWERS, AND ROOTS

RATIO, PROPORTION

COORDINATE GEOMETRY

STATISTICS

PERCENT

PROBABILITY

Work through all the questions below and check answers at the end of the worksheet. If you have any question with this section, please ask during the next class time or come to consultation.

MEASUREMENT

1.

Convert to the units shown:

a 7 cm = mm

b 500 cm = m

c 4000 m = km

d 50 mm = cm

e 6 m = cm

f 8 km = m

g 6.4 cm = mm

h 340 cm = m

i 5200 m = km

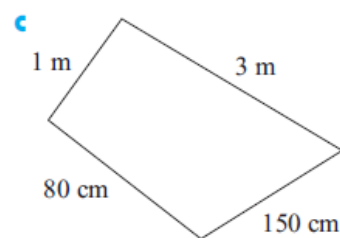
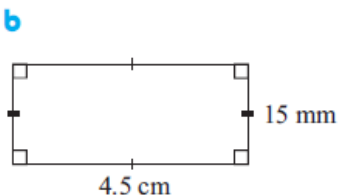
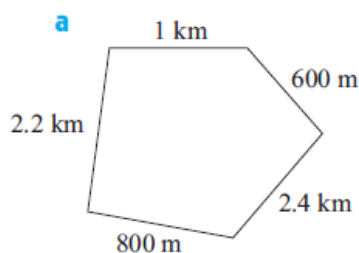
j 25 mm = cm

k 3.8 m = cm

l 1500 m = km

2.

Calculate the perimeters of the following figures:



3.

a 1.2 m² to cm²

b 0.8 km² to ha

c 97 cm² to mm²

d 5 ha to m²

e 15 000 m² to ha

f 47 600 cm² to m²

g 1600 ha to km²

h 7.9 cm² to mm²

i 0.53 km² to ha

j 5600 m² to ha

k 2.37 m² to cm²

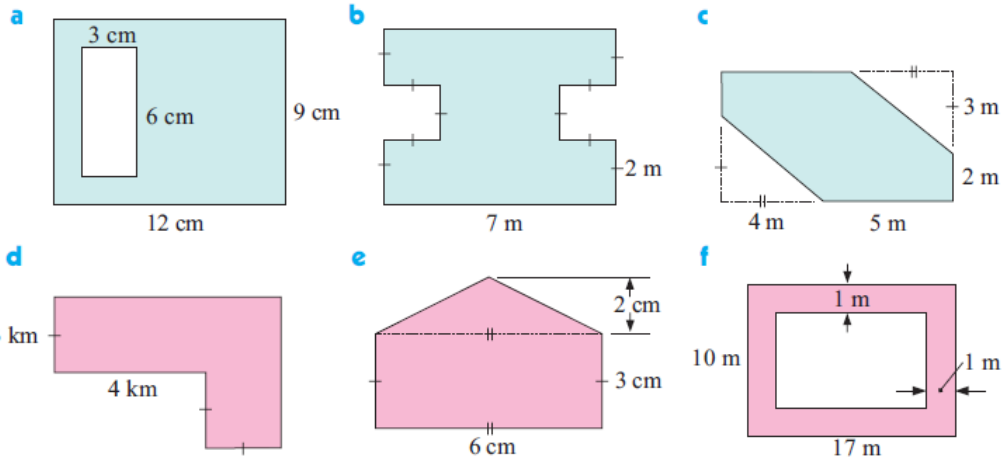
l 0.0038 m² to mm²

A piece of paper has an area of 630 cm². Express this area in mm².

AREA OF COMPOSITE SHAPES

1.

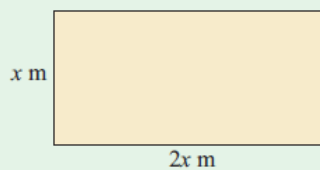
Find the areas of the following shaded regions:



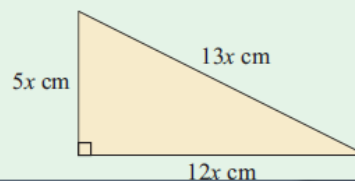
- 4 A piece of wire 640 cm long is cut into equal lengths. These are then bent into squares 4 cm by 4 cm. How many squares can be made?
- 5 The school sports fields are laid out in a rectangle 220 m by 160 m. Find the cost of fertilising the grass if 1 kg of fertiliser covers 80 square metres and fertiliser costs \$25 for a 40 kg bag.
- 6 A carpet measuring 4 m by 3 m is placed in a room 5.2 m long and 4.8 m wide. What area of the floor is left uncarpeted?
- 7 A lounge room is 5.4 m long, 4.8 m wide, and 4.2 m high. It has a door 2 m by 1 m and a window 2 m by 1.5 m.
 - a Draw a diagram to illustrate the room.
 - b If wallpaper costs €5.50 per square metre, find the cost of wallpapering the four walls.

8 Find a formula for the **i** the perimeter P **ii** the area A of:

a



b



CIRCLES

1. Define the following terms:

Radius: _____

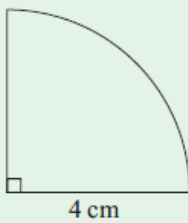
Diameter: _____

2. Find the circumference and area of the following circles with: (Leave in terms of π)

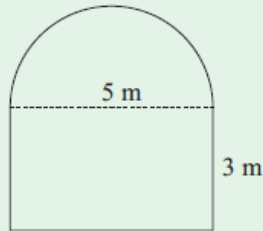
- a. $r = 5\text{cm}$
- b. $d = 10\text{cm}$

3 Find the perimeter of:

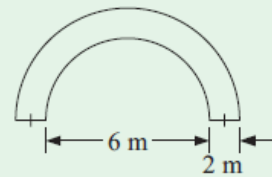
a



b



c



4 A circular disc has a diameter of 16 cm. Find the:

- a circumference
- b area of the disc.

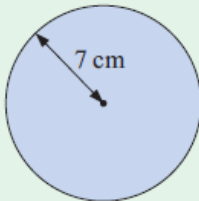
5 140 cm of metal is used to construct a circular basketball ring. Find the diameter of the ring.

6 A circle has a circumference of 90 cm. Find the:

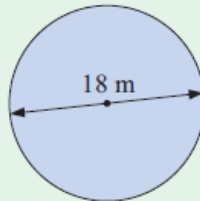
- a diameter
- b radius of the circle.

7 Find the area of:

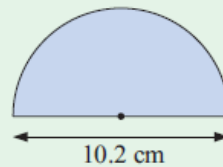
a



b



c



ANSWERS

1.

- a** 70 mm **b** 5 m **c** 4 km **d** 5 cm
e 600 cm **f** 8000 m **g** 64 mm **h** 3.4 m
i 5.2 km **j** 2.5 cm **k** 380 cm **l** 1.5 km

2.

- a** 7000 m **b** 120 mm **c** 630 cm

3.

- a** 12 000 cm² **b** 80 ha **c** 9700 mm² **d** 50 000 m²
e 1.5 ha **f** 4.76 m² **g** 16 km² **h** 790 mm²
i 53 ha **j** 0.56 ha **k** 23 700 cm² **l** 3800 mm²
63 000 mm²

4.

- a** 90 cm² **b** 34 m² **c** 33 m² **d** 30 km²
e 24 cm² **f** 50 m²

5.

- 1** **a** 7430 m **b** 1630 cm **c** 1.5 km **d** 4.69 m
e 9.438 cm **f** 2.5 m
2 **a** 19 cm **b** 20 m **c** 23 cm
3 **a** 3.5 m² **b** 30 cm² **c** 48 m²
4 40 **5** \$275 **6** 12.96 m²

- 7** **a**  **b** €443.74

- 8** **a** **i** $P = 6x$ m **ii** $A = 2x^2$ m²
b **i** $P = 30x$ cm **ii** $A = 30x^2$ cm²

6. CIRCLE

- 3** **a** 14.3 cm **b** 18.9 m **c** 29.1 m
4 **a** 50.3 cm **b** 201 cm² **5** 44.6 cm
6 **a** 28.6 cm **b** 14.3 cm
7 **a** 154 cm² **b** 254 m² **c** 40.9 cm²