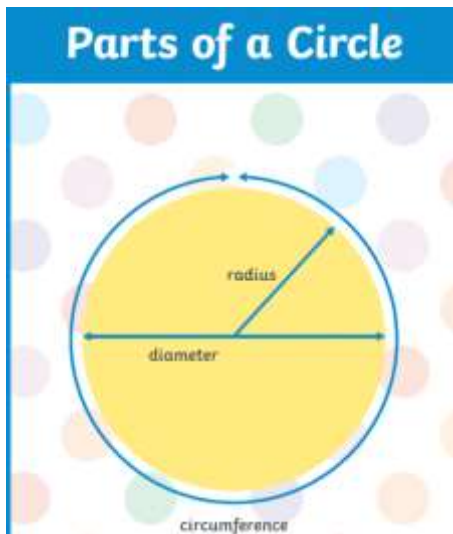


Maths work – week beginning 18th May.

Focus: circles, area/perimeter of compound shapes and volume of shapes.

Key knowledge needed for this week

Circles:



Note: radius is half the diameter

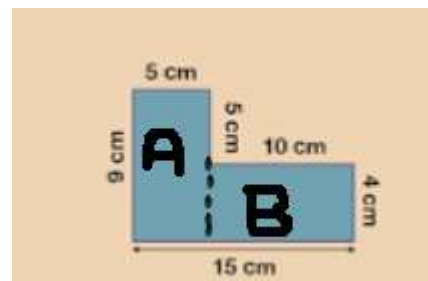
Video support on espresso (login in student password student:)

https://central.espresso.co.uk/espresso/primary_uk/subject/module/video/item353693/grade2/module326776/index.html

Area:

- to find the area of a **rectangle** you need to **multiply** the length by the width

- to find the area of a compound shape split it into smaller shapes Work out B and then add together.



you need to shape A and

- to find the area of a triangle: you need the length by the height and then divide by 2.

to multiply

(<https://www.bbc.co.uk/bitesize/topics/zjbg87h/articles/zsqxfcw>)

Perimeter:

To find the **perimeter** you need to **add** the lengths of all of the sides (you might also need to work out the missing lengths if they haven't been written on)

Session 1

Starter: make sure you know the terms and can give a definition of them

Key term	Definition
Circumference	

Diameter	
Radius	

Questions

1) What is the diameter of a circle with a radius of:

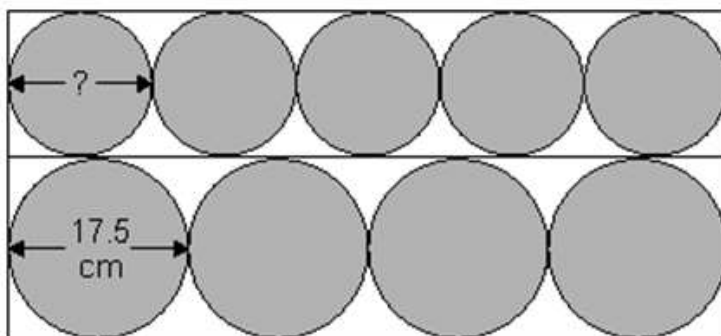
- a) 5.3 cm _____ c) 4.6 cm _____
b) 4.6 cm _____ d) 6.7 cm _____

2) What is the radius of a circle with the diameter of:

- a) 15 cm _____ c) 9.6 cm _____
b) 10.8 cm _____ d) 12.4 cm _____

Applying knowledge:

Q1. Four large circles and five small circles fit exactly inside this rectangle.



Not actual size

The **diameter** of a large circle is **17.5** centimetres.

Calculate the **diameter** of a small circle.

Sessions 2/3

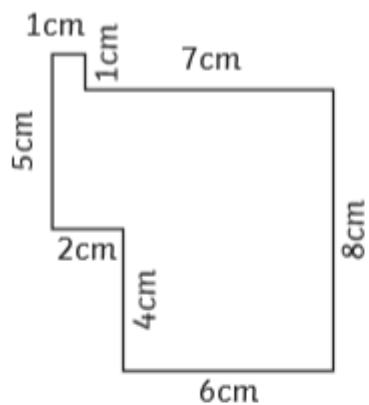
Aim: to know how to work out the area of compound shapes.

Task: complete either section a or b. Split the compound shapes into 2 or 3 smaller shapes before you try to work out the area.

A)

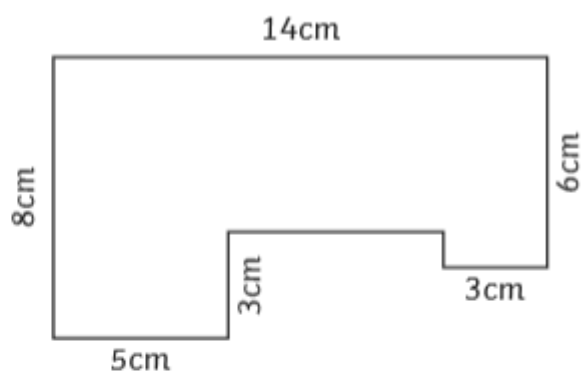
1. Example Total: <u>42 cm²</u>	2. Total: _____
3. Total: _____	4. Total: _____
5. Total: _____	6. Total: _____

7.



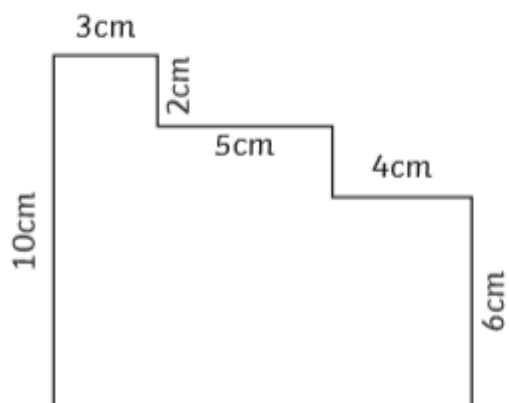
Total: _____

8.



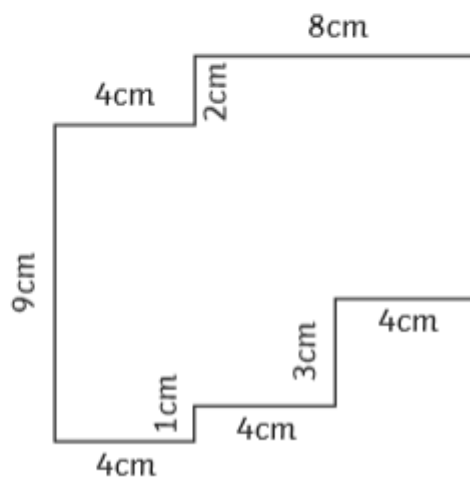
Total: _____

9.



Total: _____

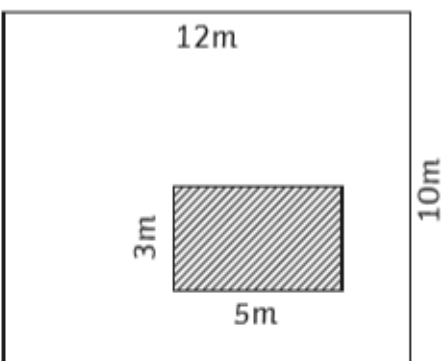
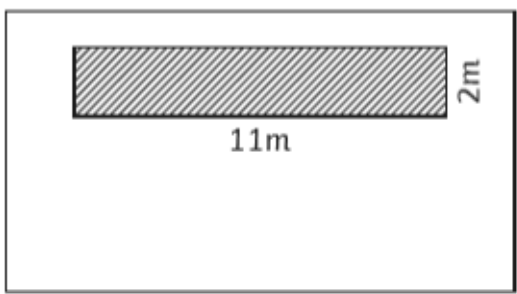
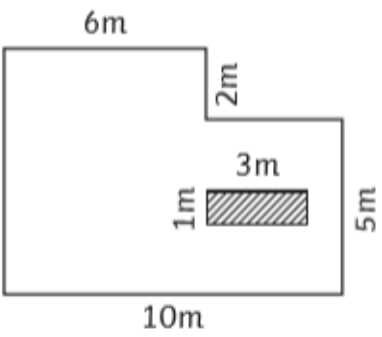
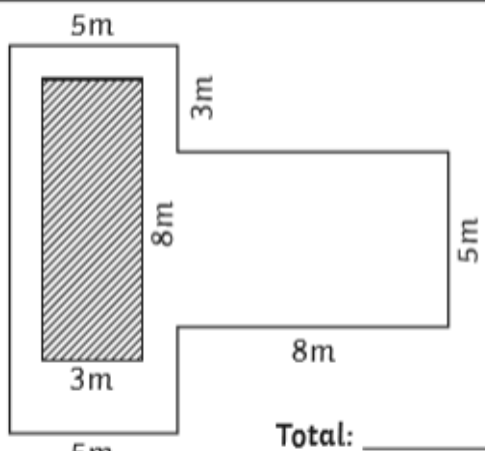
10.



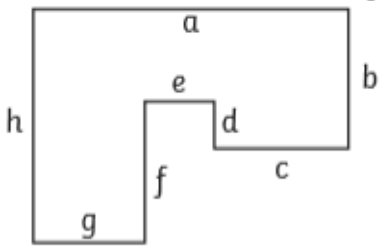
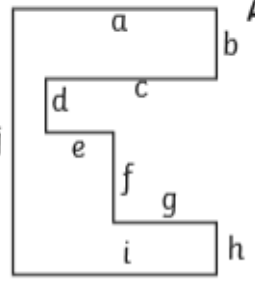
Total: _____

B)

Identify the shapes where the area can be calculated. Calculate the area of each compound shape.

1.  Total: _____	2.  Total: _____
3.  Total: _____	4.  Total: _____

Write possible measurements for these shapes based upon the area given.

5.  Area: 98m² a: _____ b: _____ c: _____ d: _____ e: _____ f: _____ g: _____ h: _____	6.  Area: 120m² a: _____ b: _____ c: _____ d: _____ e: _____ f: _____ g: _____ h: _____ i: _____ j: _____
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Extension: work out the perimeters of the shapes also.

Session 4/5:

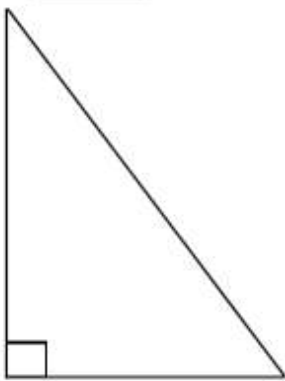
Focus: working out the areas of triangles. Remember the area of a triangle is half of base x height. So multiply the base by the height and then divide by 2. Answers will vary depending on how the sheets print off.

Complete at least 2 sheets

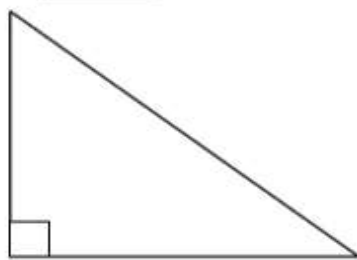
A)

Measure the shorter sides to the nearest centimetre and calculate the area of each of these right-angled triangles.

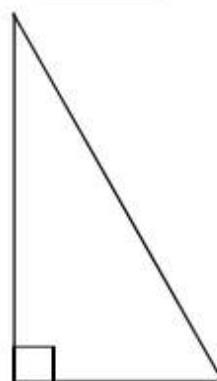
1. _____ cm²



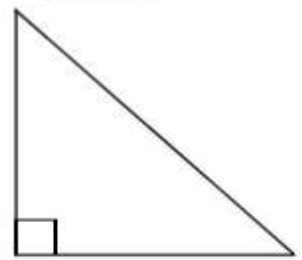
2. _____ cm²



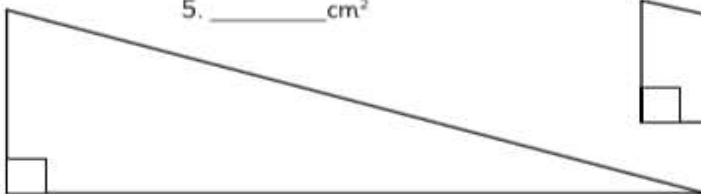
3. _____ cm²



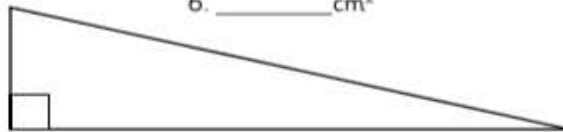
4. _____ cm²



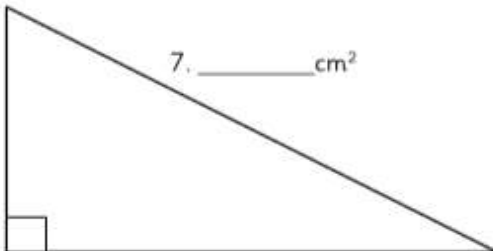
5. _____ cm²



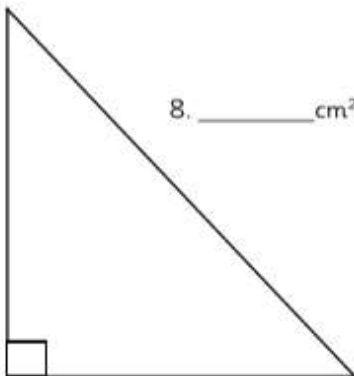
6. _____ cm²



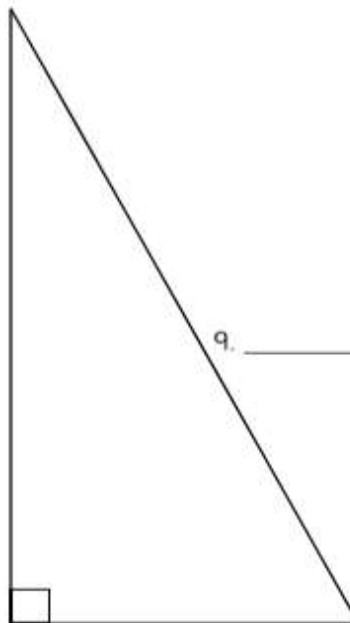
7. _____ cm²



8. _____ cm²



9. _____ cm²

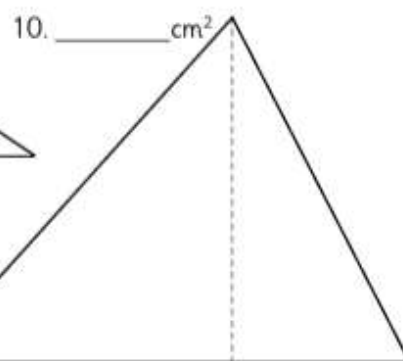
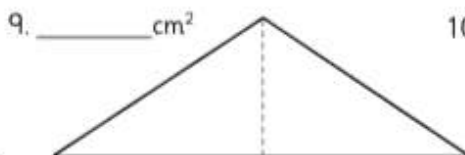
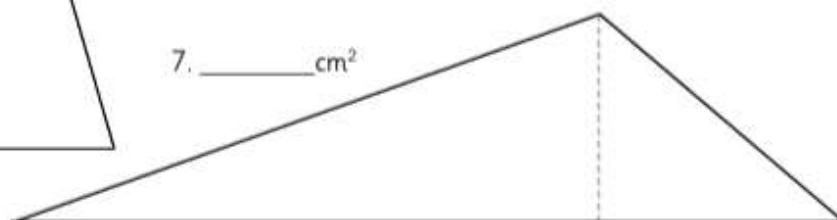
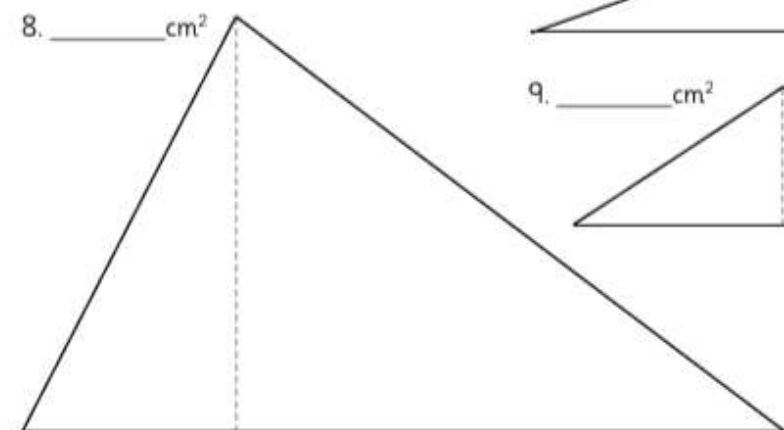
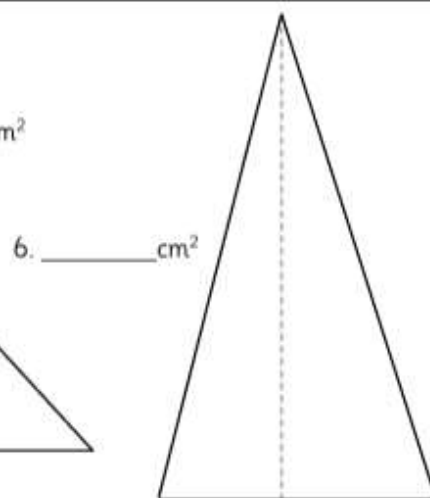
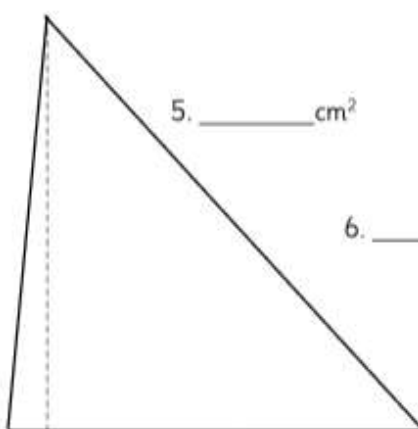
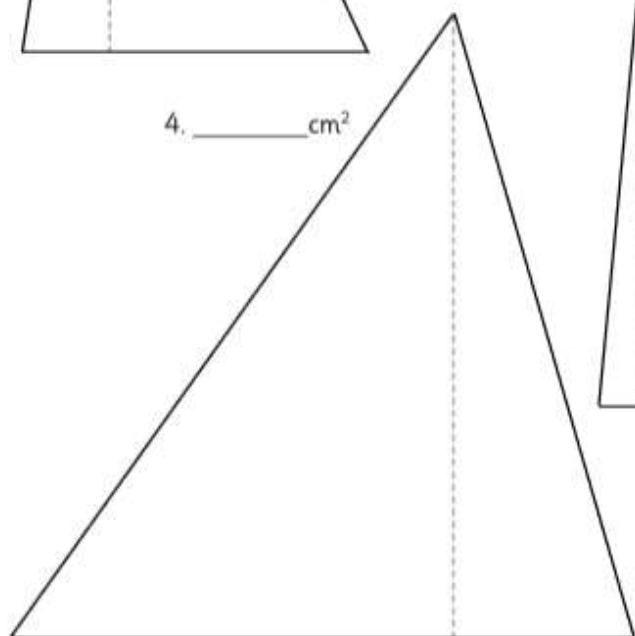
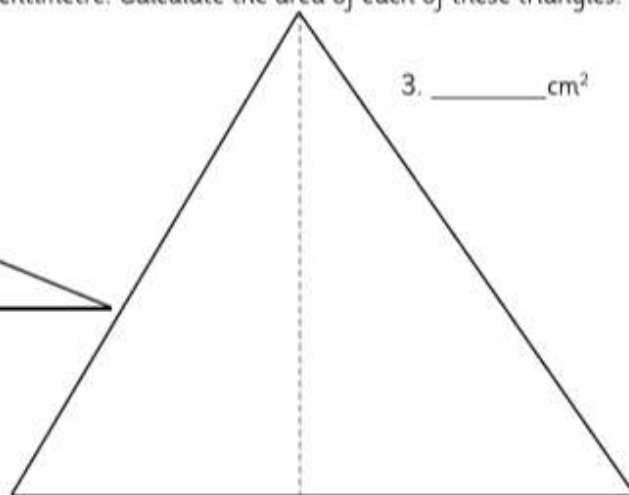
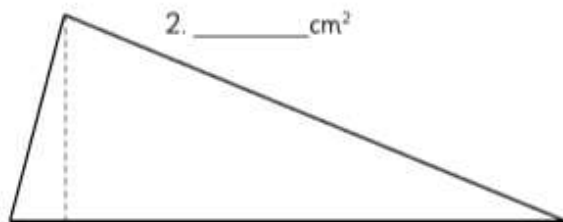
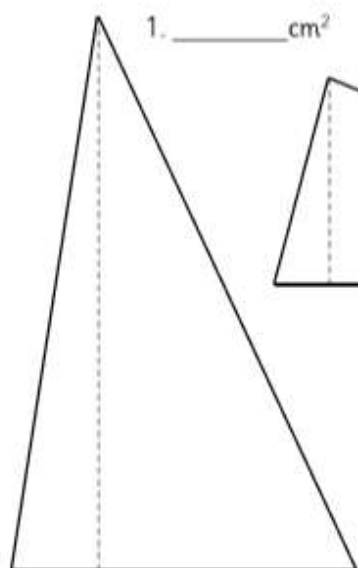


10. _____ cm²



B)

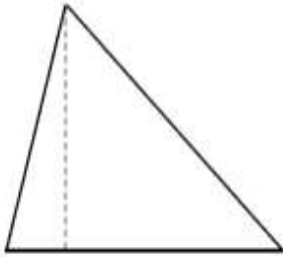
Measure the base and height of each triangle to the nearest centimetre. Calculate the area of each of these triangles.



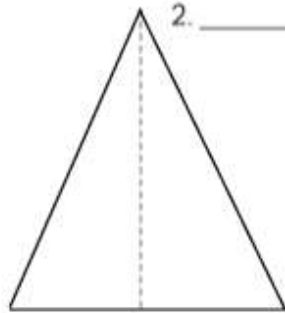
C)

Measure each side to the nearest tenth of a centimetre and calculate the area of each of these triangles.

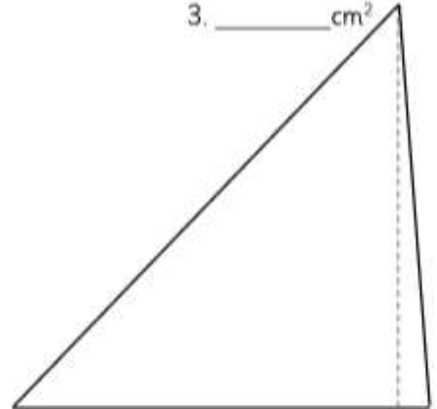
1. _____ cm^2



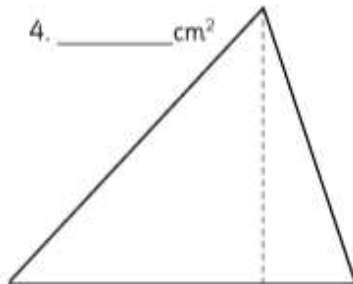
2. _____ cm^2



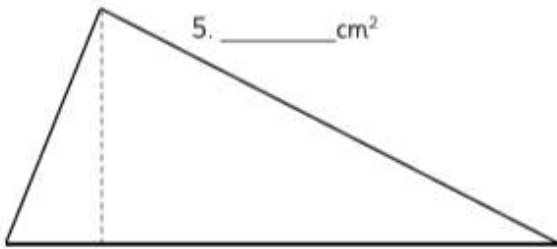
3. _____ cm^2



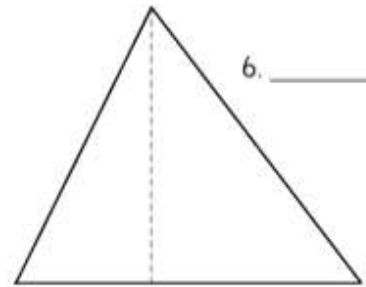
4. _____ cm^2



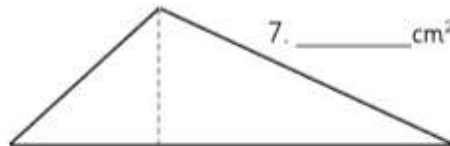
5. _____ cm^2



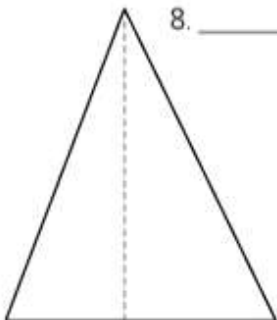
6. _____ cm^2



7. _____ cm^2



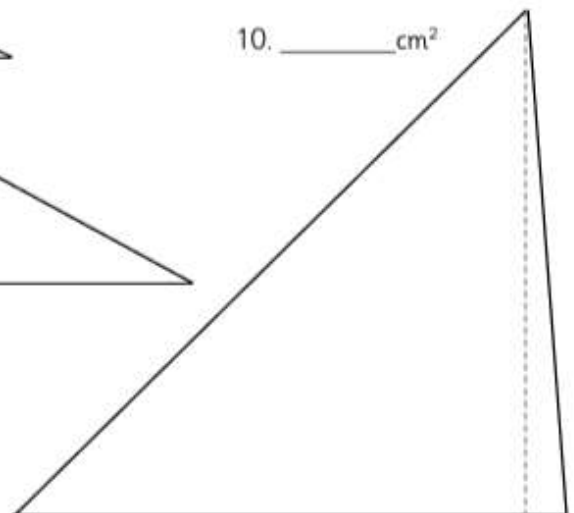
8. _____ cm^2



9. _____ cm^2



10. _____ cm^2



Session 1 answers

Questions

2) What is the diameter of a circle with a radius of:

- a) 5.3 cm 10.6cm b) 4.6 cm 9.2 cm
 c) 8.9cm 17.8cm d) 6.7 cm 13.4 cm

2) What is the radius of a circle with the diameter of:

- a) 15 cm 7.5cm c) 9.6 cm 4.8 cm
 b) 10.8 cm 5.4cm d) 12.4 cm 6.2 cm

Applying skills: answer is 14cm.

Session 2/3 answers

Question	Section A	Answer
Identify the shapes where the area can be calculated. Calculate the area of each compound shape.		
1	Total: 42cm²	6 Total: 96cm²
2	Total: 35cm²	7 Total: 57cm²
3	Total: 38cm²	8 Total: 88cm²
4	Total: 42cm²	9 Total: 94cm²
5	Total: 38cm²	10 Total: 104cm²

Question	Section B	Answer
Identify the shapes where the area can be calculated. Calculate the area of each compound shape.		
1	Total: 105m²	4 Total: 71m²
2	Total: 98m²	5 a: 14m b: 6m c: 6m d: 2m e: 3m f: 6m g: 5m h: 10m
3	Total: 59m²	6 a: 12m b: 4m c: 10m d: 3m e: 4m f: 5m g: 6m h: 3m i: 12m j: 15m

Session 4/5

Answers are based on the sheets being printed at full A4 size.

Sheet 1:

Question Number	Area
1	12cm ²
2	10cm ²
3	9cm ²
4	8cm ²
5	15cm ²
6	8cm ²
7	14cm ²
8	15cm ²
9	25cm ²
10	6cm ²

Sheet 2:

Question Number	Area
1	20cm ²
2	12cm ²
3	31.5cm ²
4	40.5cm ²
5	18cm ²
6	14cm ²
7	18cm ²
8	33cm ²
9	6cm ²
10	17.5cm ²

Sheet 3

Question Number	Area
1	7cm ²
2	8.6cm ²
3	17.4cm ²
4	10cm ²
5	13.6cm ²
6	10cm ²
7	6.4cm ²
8	9cm ²
9	9cm ²
10	29.2cm ²