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Chapter 5 (Master) Task Adventurepark Design (page 1)

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A. Your design must include at least two of each of the following shapes:

triangles rollercoaster, zoo, woods, space mountain (T)

parallelograms go karts, wavepool, garden, games (P)

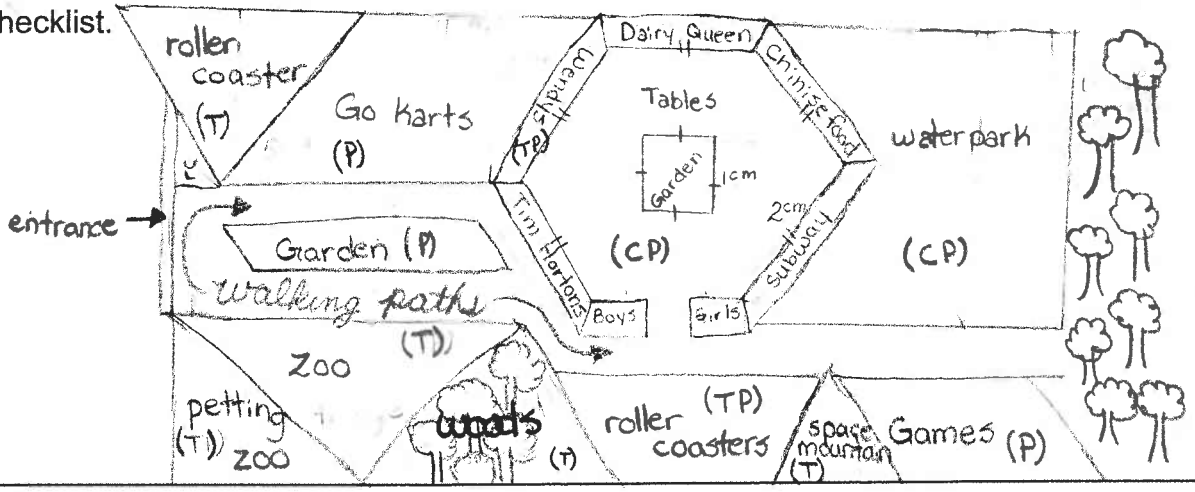
trapezoids resterants, roller coaster (TP)

complex polygons table area, water park (CP)

Decide what attractions will be included in your design.

- go karts
- roller coasters
- a zoo
- a petting zoo
- games stands
- a mountain with roller coasters and glow in the dark rides

B. Draw a rough sketch of your design of your park in the space below. Then draw a scale diagram of your design on a piece of centimetre grid paper. Make sure that you check the Task Checklist.



Task Checklist

✓ Did you include and label at least two of each shape?

✓ Did you label the grounds and the attractions?

✓ Did you show all your calculations?

✓ Did you explain how you calculated the area and perimeter of each shape?

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C. Show the perimeter and area of each shape in the following table.

Shape (design)	Perimeter formula	Perimeter	Area formula	Area
Entrance / Exit (rectangle)	P=l+w ×2 =7+1×2 =16cm	16cm	A=l×w =7×1 =7	7cm2
Petting Zoo (triangle)	P=5+6+4 =15cm	15cm	A=b×h÷2 =5×6÷2 =15	15cm2
Zoo (triangle)	P=6+6+7 =19	19cm	A=b×h÷2 =7×5÷2 =17.5	17.5cm2
Woods (triangle)	P=6+6+5 =17	17cm	A=b×h÷2 =5×5÷2 =12.5	12.5cm2
Roller Coaster (trapizoid)	P=5+5+3+7 =20	20cm	A=(a+b)×h÷2 =7.3+3×5÷2 =10.3×5÷2 =51÷5 =10.3	10.3cm2
Space Mountain (triangle)	P=7+7+6 =20	20cm	A=b×h÷2 =6×6.5÷2 =39÷2 =19.5	19.5cm2
Arcade (parallelagram)	P=7.5+6.5×2 =28	28cm	A=b×h =6.5×6.5 =13	13cm2
Tourist Shop (trapizoid)	P=4+4+7+9 =24	24cm	A=(a+b)×h÷2 =7+9×5÷2 =40	40cm2
Roller Coaster (Triangle)	P=5+4.5+4.5 =14	14cm	A=b×h÷2 =5×4÷2 10	10cm2
Wave Pool (triangle)	P=4.5+4+2 =10.5	10.5cm	A=b×h÷2 =2×4÷2 =8÷2	4cm2

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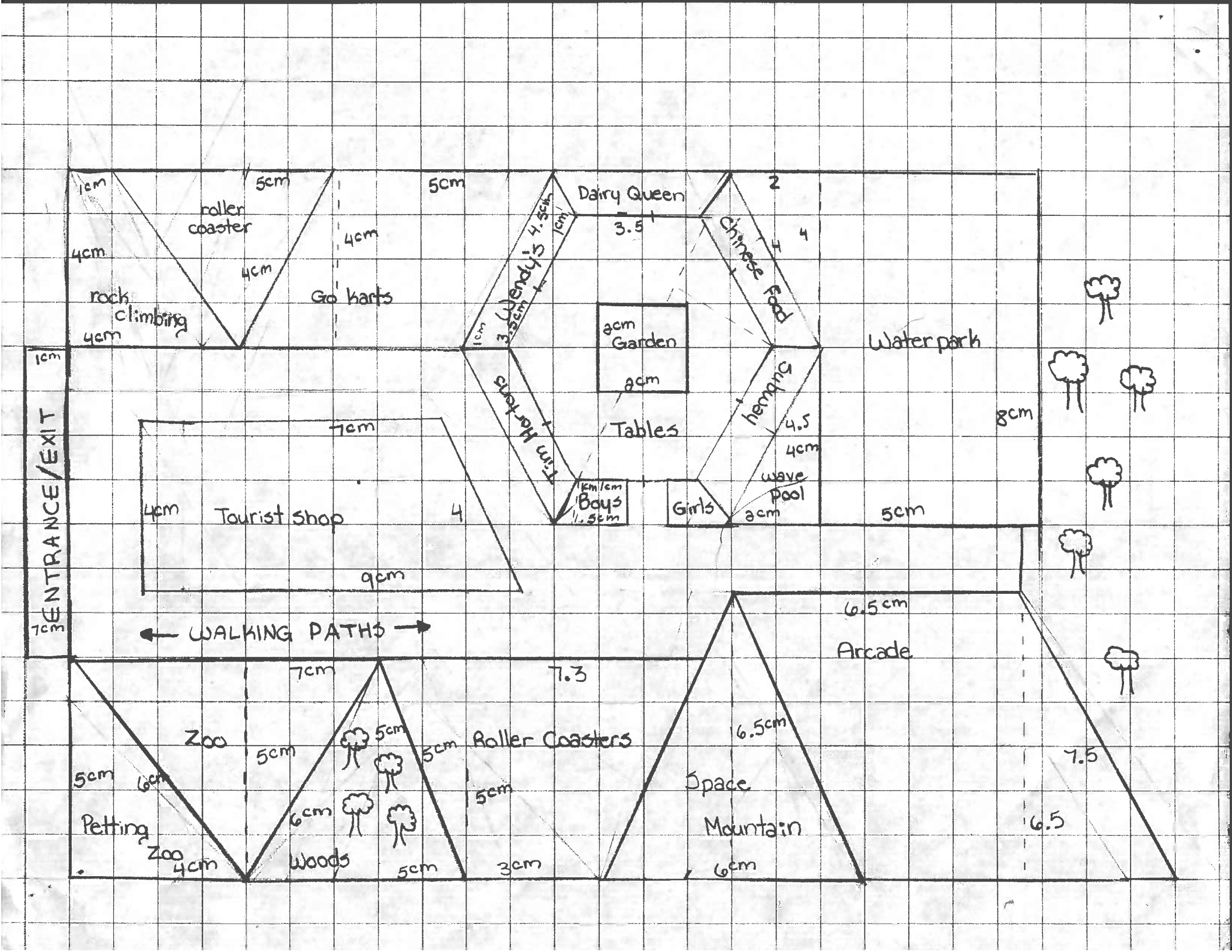
D. Describe your design, and explain how you calculated the area the perimeter and area of each shape in the following table.

Name of Design/Shape	Description of Design/Shape
Complex Polygon (Table Area)	The table area, I got the perimeter for by adding all the sides up and I did not exclude the garden because perimeter means the outside of an object but the garden is inside. I got the area because I divided my hexagon into 2 trapizoids becaus there were 2 of them so I didn't have to multiply by 2.
Triangles	The triangles were easy because you only had to add up 3 of the sides, but you dont add the hieght because that is inside the triangle. The area, I used the formula which was b×h÷2 and then I had the area of my triangle which ever one I did.


roller coaster
rock climbing
Go karts
Dairy Queen
Wendy's
Chinese Food
Garden
Tables
Ferris Wheels
hanging
Water park
wave Pool
Boys
Girls
Tourist Shop
ENTRANCE/EXIT
WALKING PATHS
Arcade
Zoo
Petting Zoo
Woods
Roller Coasters
Space Mountain