Name: _____ Date: _____

Perimeter and Area

1. In each of the following situations, determine if its more appropriate to calculate the perimeter or the area of the polygon.

a) Putting lace around the edge of a tablecloth: _____

b) Laying grass on a lot of land: _____

c) Calculating the time necessary to complete one lap at the Velodrome: _____

d) Painting a door: _____

e) Recovering a driveway with asphalt: _____

f) Determining the price to pay to buy a piece of land: _____

g) Framing a painting: _____

h) Replacing a mirror: _____

2. Indicate the most appropriate unit of measure to measure:

a) The height of a bridge: _____

b) The distance between Montreal and Toronto _____

c) The thickness of a ruler: _____

d) The quantity of snow that falls: _____

e) The width of a blackboard: _____

f) The length of the St. Laurence River: _____

g) The quantity of rain that falls: _____

3. Indicate the most appropriate unit of measure to measure:

a) The surface of your bedroom floor: _____

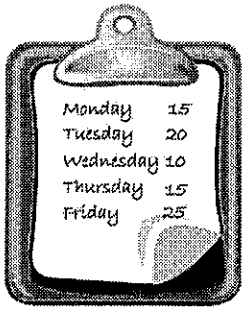
b) The surface are of a county: _____

c) The area of a page in your book: _____

d) The area of a beauty mark: _____

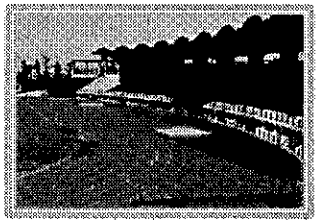
Skill Builder 1 Measuring Length EVALUATED

1 Katie was training for the annual marathon. On her training schedule, her coach listed running distances for her to attempt each day but did not give a unit of measurement. Which unit of length would you expect these distances to be measured in?



_____

2 A new track and field facility has been built in the local area. Today, the authorities are checking the length of the lanes to ensure that they meet regulation standards. Given the following measuring tools, which one would be most suited for this purpose?

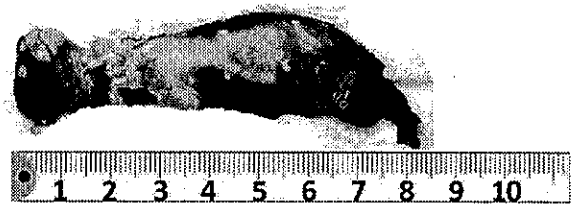


_____

3 Match the items on the left with their approximate measurement on the right.

Length of a shoe	3 mm
Width of a student's ruler	3 m
Height of a doorway	3 dm
Thickness of an iPod	3 cm

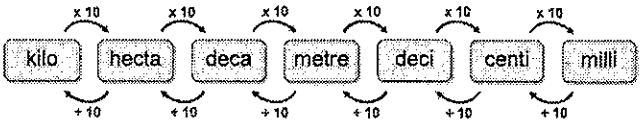
4 From top to toe, how long is the newborn kitten shown in the diagram below? Give your answer in both centimetres and millimetres.



_____

5 Use the conversion chart shown below to change the following units to centimetres.

- 0.5 kilometres _____
- 1.02 metres _____
- 38 decimetres _____
- 152 millimetres _____



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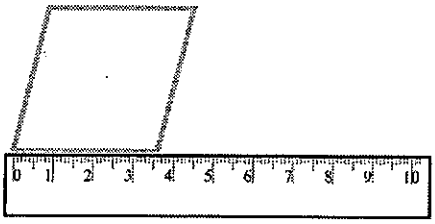
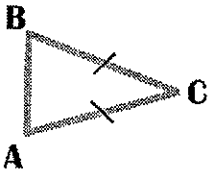
6 Monica is building a science project and needs a total of 2.5 metres of wire to finish. She has three pieces that are 17 decimetres, 32 centimetres and 55 millimetres. Does she have enough wire to complete her work?

7 Find the perimeter of the rhombus shown below. Give your answer in millimetres.



8 Edward is building a decorative wooden frame for his bathroom mirror. His rectangular mirror is 12.8 dm × 6.2 dm. Calculate the total length of wood required to build the frame.

9 Find the perimeter of ΔABC, where $\overline{AC} = 12$ m and $\overline{AB} = 950$ cm. Give your answer in metres.



10 Find the perimeter of a rectangular poster with dimensions 85 cm × 450 mm. Give your answer in centimetres.

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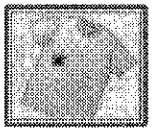
5 Measuring Area EVALUATED

Skill Builder

1 From the options listed on the right, choose the most appropriate unit to measure the area of:

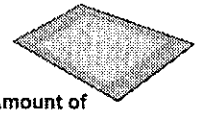
A stain on a shirt



.....

Amount of plastic to cover a book.

.....



Amount of floor covered by a rug

.....

Square centimetres

Square decimetres

Square metres

2 Patti has 4 different sized fabric swabs that she would like to use to decorate her bedroom.

1 m^2

2 m^2

3 m^2

4 m^2

Which fabric swab from those shown above would be most appropriate for each of the following?

- Curtains for her window – 1 m × 0.5 m

  _____

- Cover for her bed – 2 m × 1.75 m

  _____

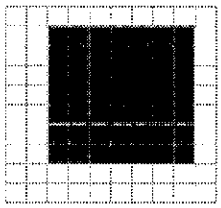
- Drape to cover her wardrobe – 2 m × 0.75 m

  _____

- Decoration around her mirror – 5 m × 0.5 m

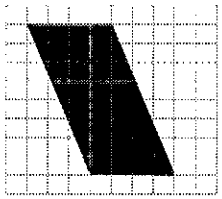
  _____

3 Using the centimetre square grid shown below, find the area of the given shaded square.



_____

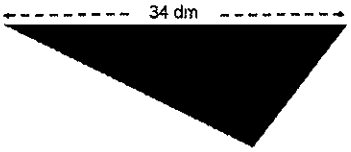
4 Using the centimetre square grid shown below, find the area of the given shaded parallelogram.



_____

5 Use the formula to calculate the area of the triangle below:

Area$_{\triangle}$ = (base x height) ÷ 2



_____

My Calculations

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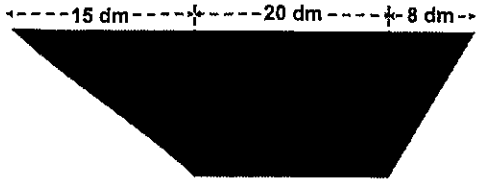
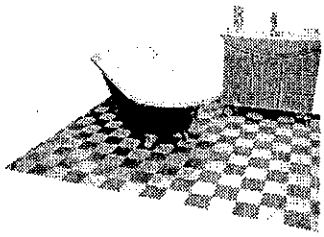
6 Calculate the total area of the trapezoid below by splitting it into one rectangle and two triangles.



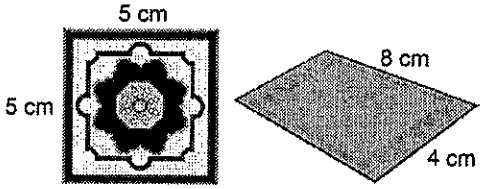
My Calculations

7 The number of tiles required for a bathroom floor is based on its area in square metres. Julie's rectangular-shaped bathroom is 13 m × 9 m. How much space is she covering with tiles?

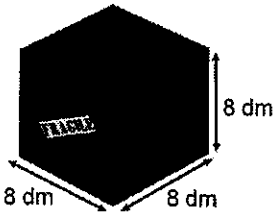


My Calculations

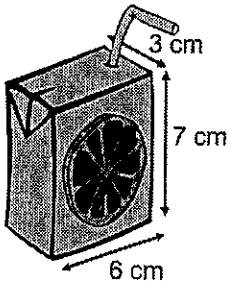
8 Ben's kitchen has a 28 cm^2 patch on its floor that is water damaged. Until he can afford the repairs, he plans to buy a rug to cover the damaged area. Given the dimensions of the square and the rectangular rugs below, which one would be the most appropriate to cover the damaged area.



9 The dimensions of a shipping crate are 8 dm × 8 dm × 8 dm. How much timber is required to manufacture the crate?



10 Juice boxes are made from a special kind of paper that can hold liquid. Given the dimensions below, what quantity of paper is required to produce one juice box? (Ignore any overlap).



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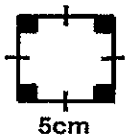
Skill Builder

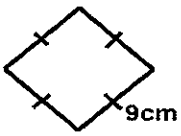
3 Perimeter of a Polygon Level 1

EVALUATED

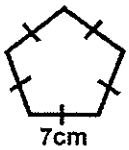
1 Calculate the perimeter of the following square.



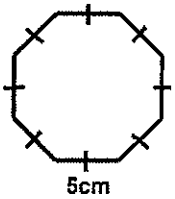
2 Calculate the perimeter of the following rhombus.



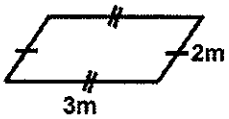
3 Calculate the perimeter of the following regular pentagon.



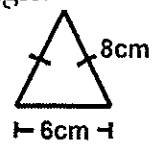
4 Calculate the perimeter of the following regular octagon.



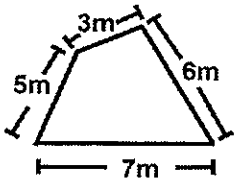
5 Calculate the perimeter of the following parallelogram.



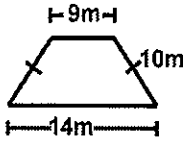
6 Calculate the perimeter of the following isosceles triangle.



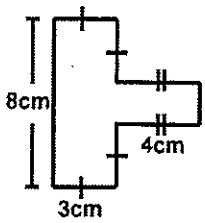
7 Calculate the perimeter of the following quadrilateral.



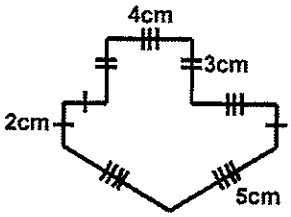
8 Calculate the perimeter of the following isosceles trapezoid.



9 Calculate the perimeter of the following diagram.



10 Calculate the perimeter of the following diagram.



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4 Perimeter of a Polygon Level 2

EVALUATED

Skill Builder

1 The side length of a regular hexagon measures 9dm. What is the perimeter in cm?

_____

My Calculations

2 The dimensions of a rectangle are 9m by 4m. What is the perimeter in cm?

_____

My Calculations

3 The perimeter of a regular pentagon is 600cm. What is the length of each side in dm?

_____

My Calculations

4 The perimeter of a regular hexagon is 840mm. What is the length of each side in dm?

_____

My Calculations

5 The perimeter of a square is 48mm. What is the length of each side in cm?

_____

My Calculations

6 The perimeter of a rhombus is 56cm. What is the length of each side?

_____

My Calculations

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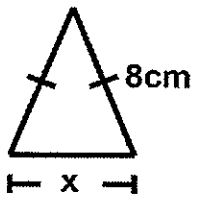
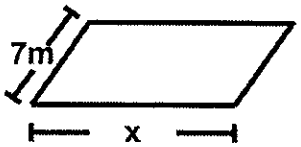
7 The perimeter of the following isosceles triangle is 23cm. What is the measure of the missing side x?



My Calculations

8 The perimeter of the following parallelogram is 32m. What is the measure of the missing side x?



My Calculations

9 Yolanda's property is in the shape of a square. The perimeter of her property is 160m. She wants to plant a cedar hedge on three sides of her property. If it costs $10 per m of hedge, how much money will she spend?

My Calculations

10 A square measuring 9cm per side has the same perimeter as an equilateral triangle. What is the measure of each side of this triangle?

My Calculations

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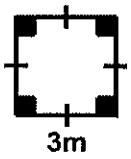
7 Areas of Polygons Level 1

EVALUATED

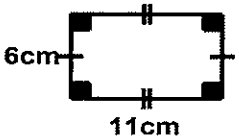
Skill Builder

1 Calculate the area of the following square.



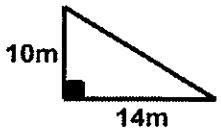
My Calculations

2 Calculate the area of the following rectangle.



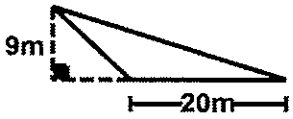
My Calculations

3 Calculate the area of the following triangle.



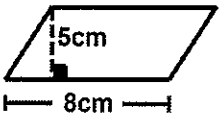
My Calculations

4 Calculate the area of the following triangle.



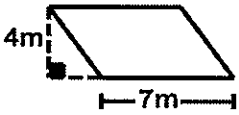
My Calculations

5 Calculate the area of the following parallelogram.



My Calculations

6 Calculate the area of the following parallelogram.



My Calculations

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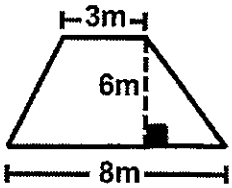
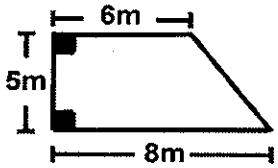
7 Calculate the area of the following trapezoid.



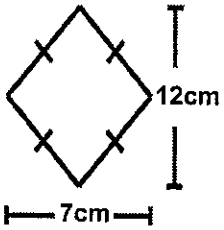
My Calculations

8 Calculate the area of the following trapezoid.



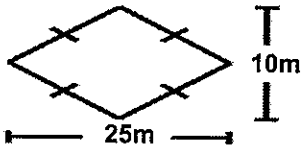
My Calculations

9 Calculate the area of the following rhombus.



My Calculations

10 Calculate the area of the following rhombus.



My Calculations

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8 Areas of Polygons Level 2

EVALUATED

Skill Builder

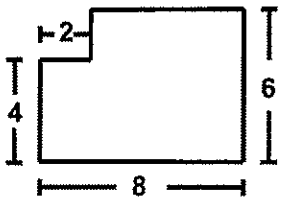
1 What is the area of a parallelogram in cm^2 when its height measures 5.2cm and its base measures 85mm?

My Calculations

2 Calculate the area of a rhombus whose long diagonal measures 12cm and the short diagonal measures 0.08m.

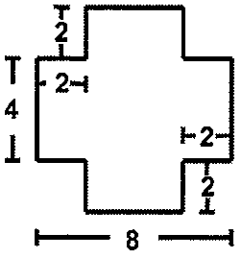
My Calculations

3 Find the area of the following shape by breaking it into rectangles. All measurements are in cm.



My Calculations

4 Find the area of the following shape by breaking it into rectangles. All measurements are in m.



My Calculations

5 A parallelogram has an area of $96m^2$. Calculate the height if the base measures 16m.

My Calculations

6 A trapezoid has an area of $100cm^2$. Calculate the measure of the height if the long base measures 12cm and the short base measures 8cm.

My Calculations

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7 The perimeter of a rectangle is 42dm. If the height is 11dm, what is the area of the rectangle in cm^2?

My Calculations

8 The area of a rectangle is $50cm^2$. If the height is 5cm, what is the perimeter of the rectangle?

My Calculations

9 The tin roof of a house is made from 4 identical triangles each having a base of 10m and a height of 6m. How much would it cost to paint this roof if it costs \$3 per m^2?

My Calculations

10 A litre of paint covers an area of $12m^2$. The 4 interior walls of warehouse are rectangles with dimensions of 9m by 16m. How many litres of paint would it take to cover the interior walls of the warehouse?

My Calculations

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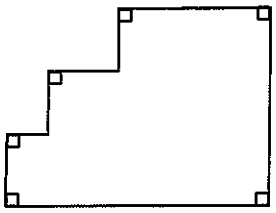
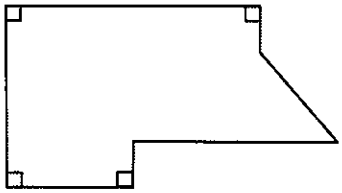
9 Introduction to Areas of Composite Figures EVALUATED

Skill Builder

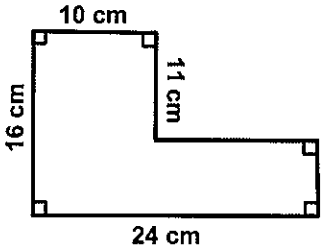
1 Break the composite figure into polygons that allow you to easily find their areas.



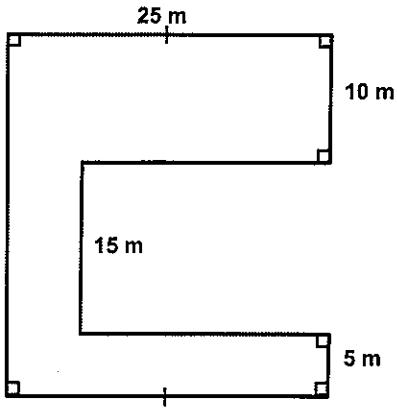
2 Break the composite figure into polygons that allow you to easily find their areas.



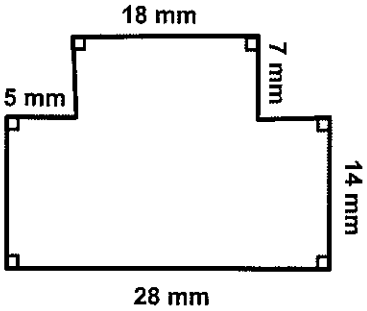
3 Determine the lengths of the missing sides.



4 Determine the total vertical height and the total horizontal width of the following composite figure.

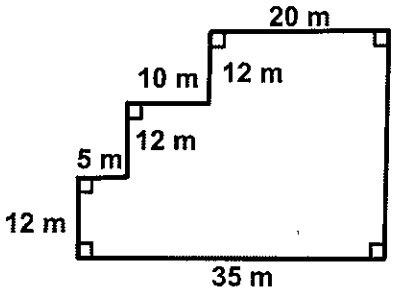


5 Determine the area of the composite figure.



My Calculations

6 Determine the area of the composite figure.



My Calculations

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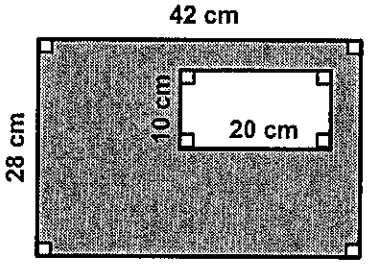
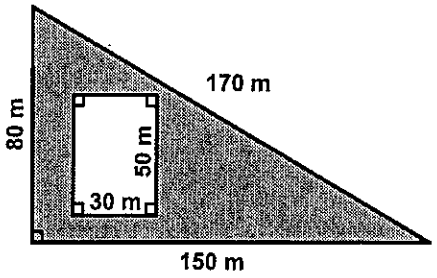
7 Determine the area of the shaded region.



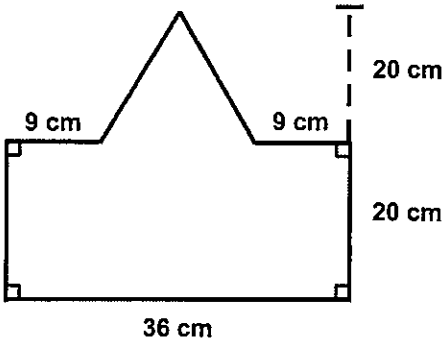
My Calculations

8 Find the area of the shaded region.



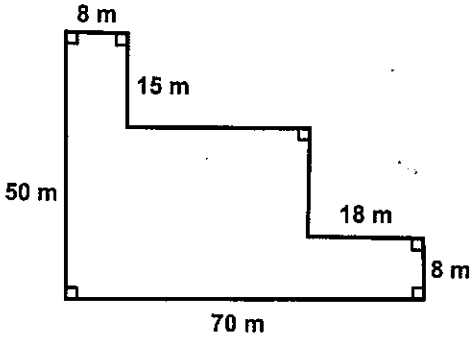
My Calculations

9 Determine the area of the composite figure.



My Calculations

10 Determine the area of the composite figure.



My Calculations

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