

Name: _____

Core: _____

Unit 3 Geometry: Triangles and Quadrilaterals
Scoring Rubric – Packet Due Wednesday, December 20th

Page 1: Area of Triangles

Feedback _____

Score ____ / 6

Page 2: Perimeter and Types of Triangles

Feedback _____

Score ____ / 12

Page 3: Sum of the interior angles of Triangles

Feedback _____

Score ____ / 6

Page 4: Identifying Types of Triangles

Feedback _____

Score ____ / 5

Page 5: Area and Perimeter of Parallelograms

Feedback _____

Score ____ / 15

Page 6 - 7: Area and Perimeter of Irregular Shapes

Feedback _____

Score ____ / 12

Page 8: Identifying Types of Quadrilaterals

Feedback _____

Score ____ / 15

Page 9: Area of Trapezoids

Feedback _____

Score ____ / 4

Completed by Wednesday, December 20th _____ - 5 easy points!

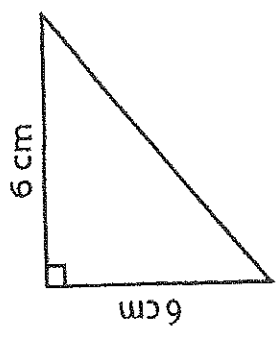
Add up your total score: ____ / 80

Find the area of each triangle.

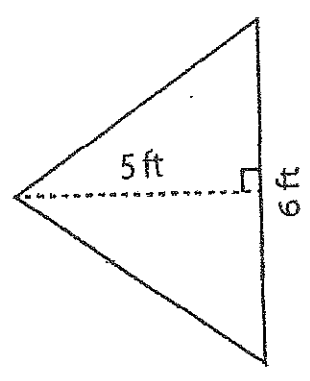
Area formula for triangles: _____

3)

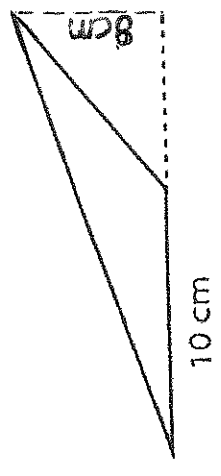
2)



Area =



Area =

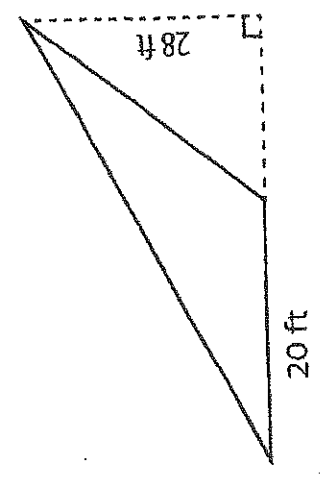


Area =

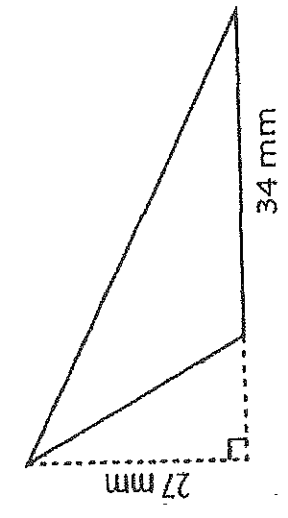
6)

5)

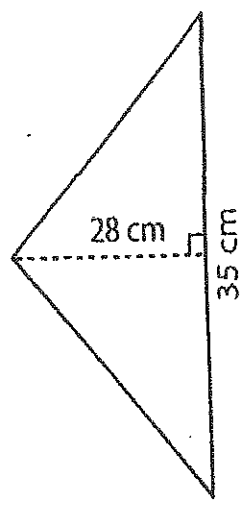
4)



Area =



Area =



Area =

Name: _____

Core: _____

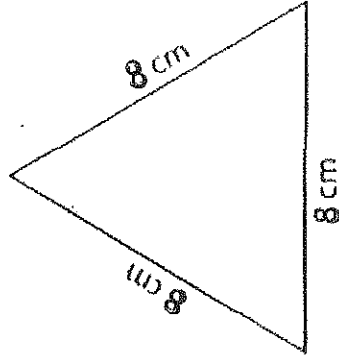
Homework: Triangle Types, Area and Perimeter

Due Wednesday, January 11th

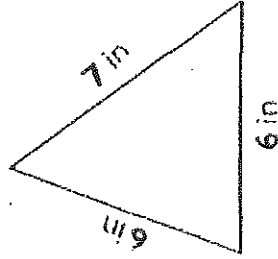
Name each triangle and find the perimeter. Include correct units for the perimeter.

Types of Triangles: Equilateral Isosceles Scalene
Right Acute Obtuse

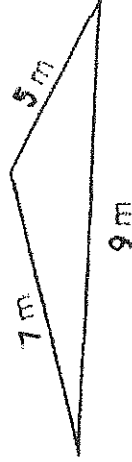
1)



2)

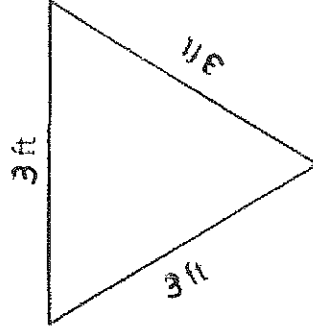


3)

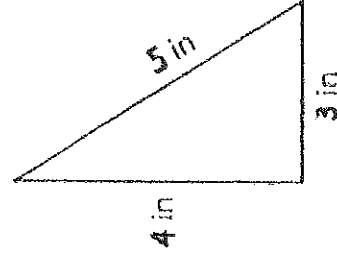


Perimeter: $8+8+8=24$ cm
Equilateral acute triangle

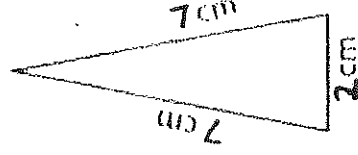
4)



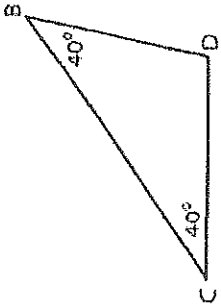
5)



6)



Example:



Sum of the interior angles = 180°

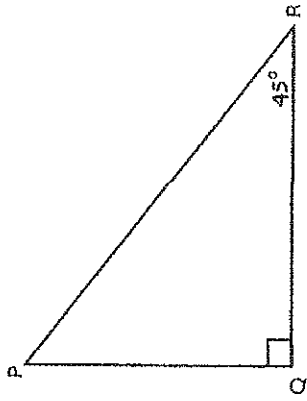
Sum of the interior angles = $40^\circ + 40^\circ + \angle D$

$$180^\circ = 80^\circ + \angle D$$

$$\angle D = 180^\circ - 80^\circ = 100^\circ$$

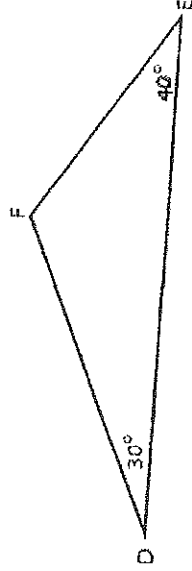
Find the unknown interior angle for each triangle.

1)



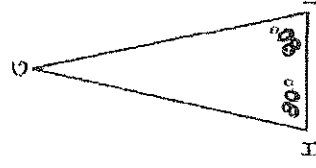
$$\angle P = \text{○}$$

2)



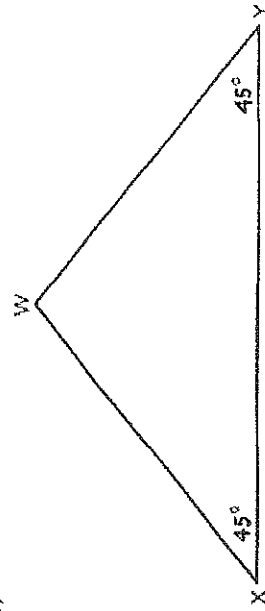
$$\angle F = \text{○}$$

3)



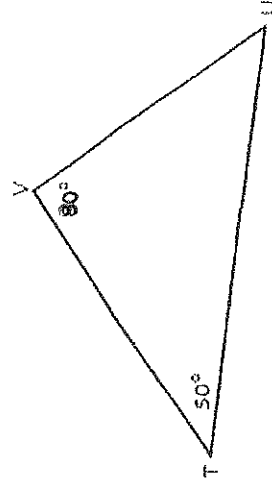
$$\angle G = \text{○}$$

4)



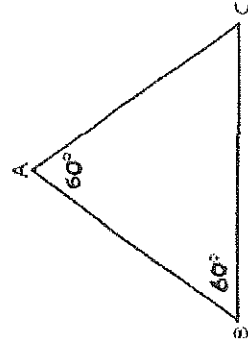
$$\angle W = \text{○}$$

5)



$$\angle U = \text{○}$$

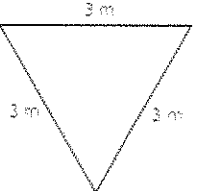
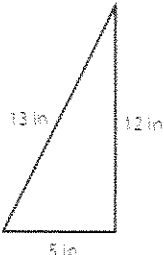
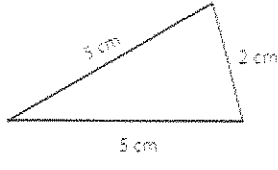
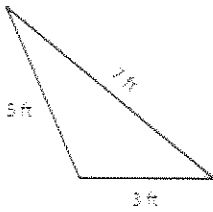
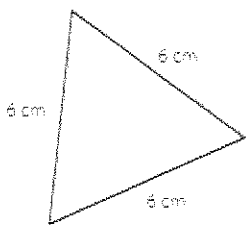
6)



$$\angle C = \text{○}$$

Identifying Types of Triangles

Tick the boxes that apply to each triangle.

Triangle	Equilateral	Isosceles	Scalene	Acute	Obtuse	Right
1) 						
2) 						
3) 						
4) 						
5) 						

Area and Perimeter of Triangles and Quadrilaterals

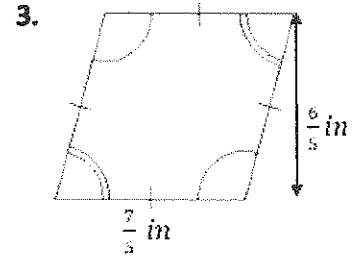
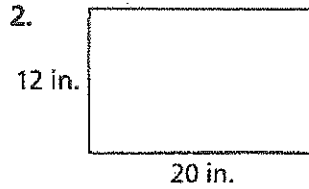
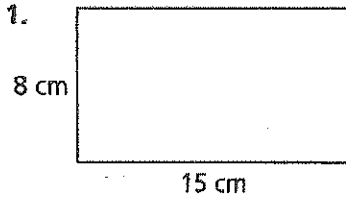
Review Questions:

How do I find the perimeter of any figure?

How do I find the area of a triangle?

How do I find the area of a parallelogram (includes square and rectangle)?

Find the area and perimeter for each of the parallelograms below.



Area:

Area:

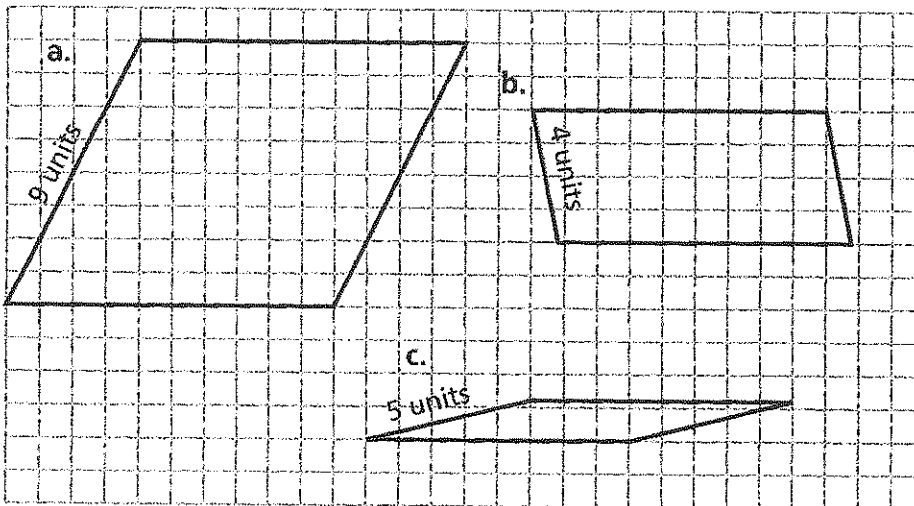
Area:

Perimeter:

Perimeter:

Perimeter:

For each of the following, find the area and the perimeter of the parallelogram.



a. Area:

b. Area:

c. Area:

Perimeter:

Perimeter:

Perimeter:

Area and Perimeter of Irregular Shapes

The following problems deal with irregular shapes. All angles are right angles, so each irregular shape can be made into rectangles.

Step 1: Draw rectangles on each irregular shape.

Step 2: Find any missing lengths for each rectangle and label the parts on the picture.

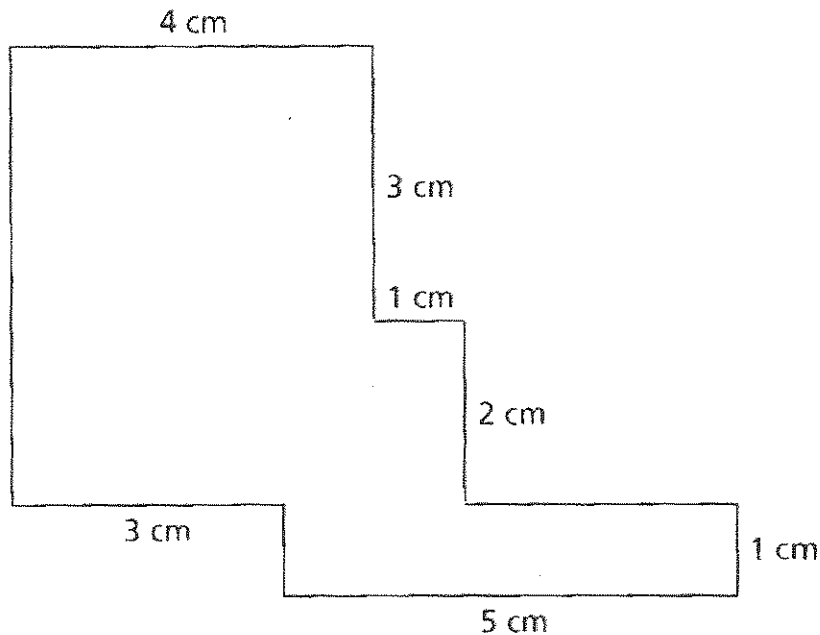
Step 3: Find the area of each rectangle in the irregular shape.

Step 4: Add up the area for each rectangle to find the total area of the irregular shape.

Step 5: Make sure all sides of the irregular shape have a length labelled.

Step 6: Add up all sides of the irregular shape to find the perimeter.

Use the diagram below to answer the following questions. (All angles in the diagram are right angles.)

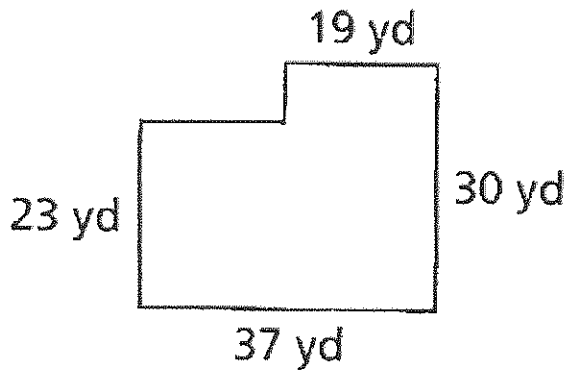


- What is the perimeter of the figure?
- What is the area of the figure?
- Explain how you found your answers for parts (a) and (b).

Area and Perimeter of Irregular Shapes

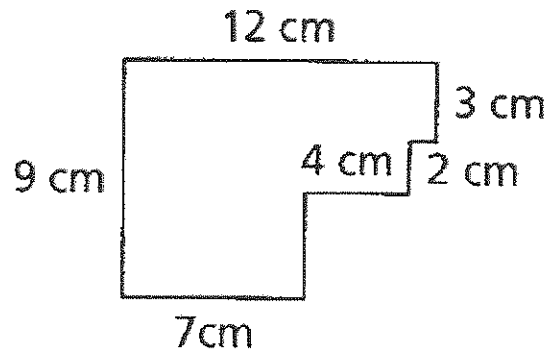
Find the area and perimeter of the following irregular shapes.

Remember the steps on the previous page.



Area:

Perimeter:

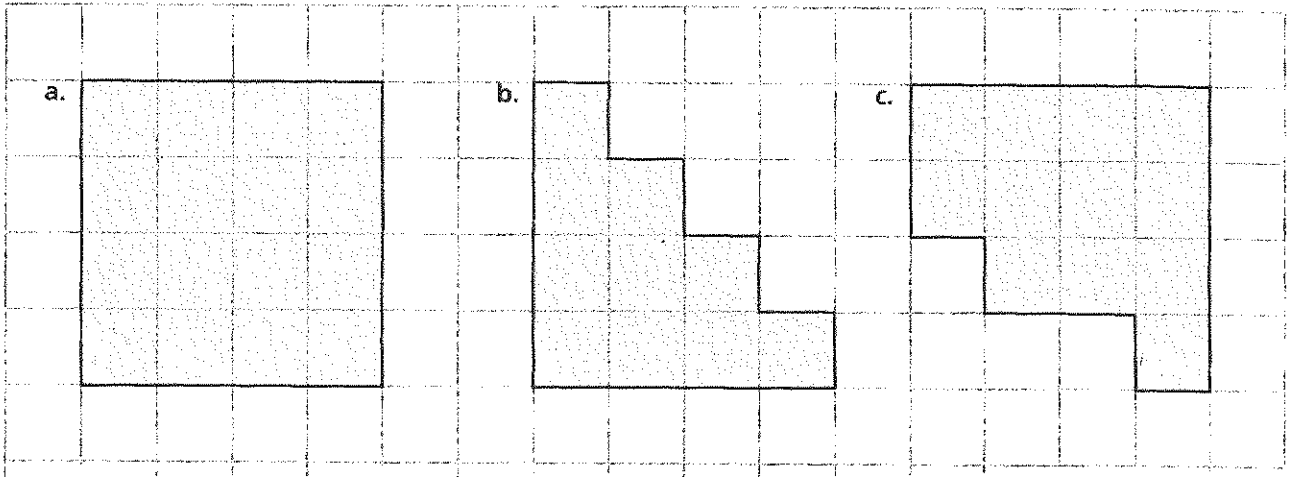


Area:

Perimeter:

Each square in the grid below has an area of 1 unit².

5. Find the area and perimeter of each figure below.



Area:

Perimeter:

Area:

Perimeter:

Area:

Perimeter:

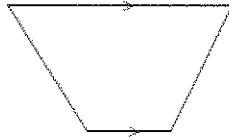
Identifying Types of Quadrilaterals

Write the name below each quadrilateral.

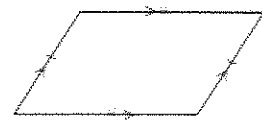
1)



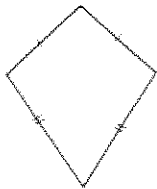
2)



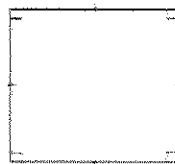
3)



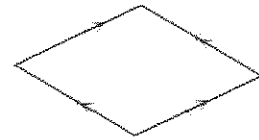
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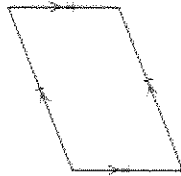
5)



6)



7)



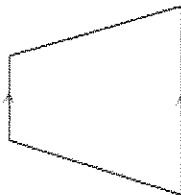
8)



9)



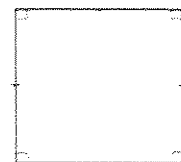
10)



11)



12)



Go through each quadrilateral again. Find which quadrilaterals can have more than one name.

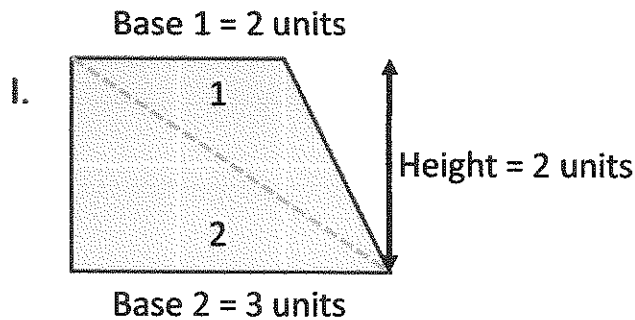
13. What do the arrows mean?

14. What do the slash marks on the side mean?

15. What do the little squares in the angles mean?

Area of Trapezoids

Draw in one diagonal on each of the trapezoids below to split into two triangles.
 Label the heights and bases of each triangle.
 Find the total area of for each trapezoid.



Find the area of Triangle 1:

Find the area of Triangle 2:

Add the areas of Triangle 1 and Triangle 2 together

Trapezoid Area =

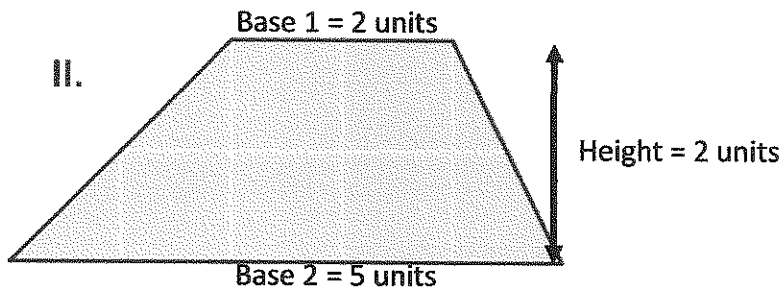
The area of each trapezoid is found by adding the area of the two triangles in the trapezoid together.

Total Area = Area of Triangle 1 + Area of Triangle 2

$$\text{Total Area} = \frac{1}{2} \times \text{Base 1} \times \text{Height} + \frac{1}{2} \times \text{Base 2} \times \text{Height}$$

We can simplify this to an easier formula to remember:

$$\text{Area of Trapezoids} = \frac{1}{2} \text{Height} \times (\text{Base 1} + \text{Base 2})$$



$$\begin{aligned} \text{Area of Trapezoid} &= \frac{1}{2} \times \underline{\quad} \times (\underline{\quad} + \underline{\quad}) \\ &= \frac{1}{2} \times \underline{\quad} \times \underline{\quad} \\ &= \end{aligned}$$