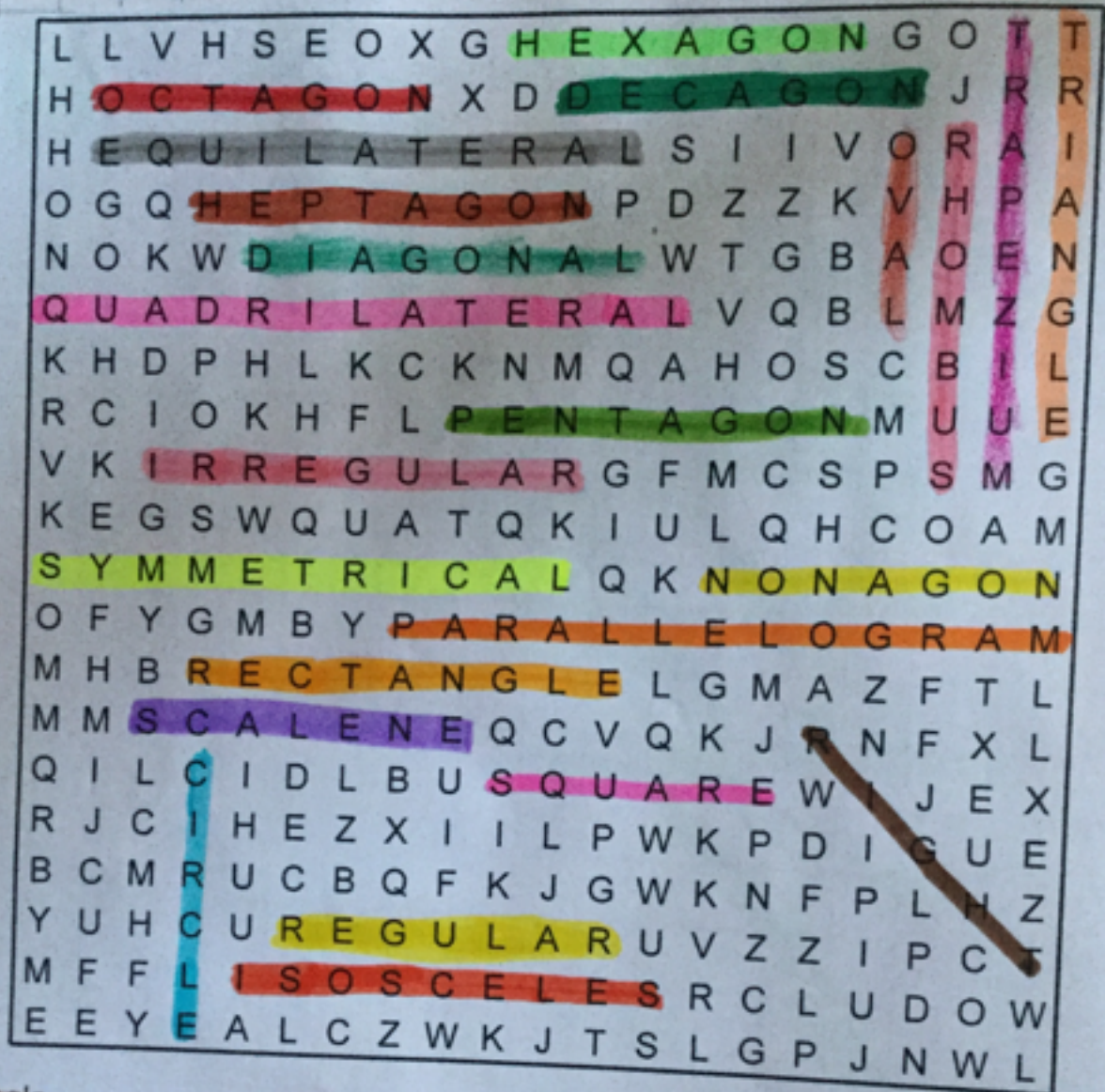


Wednesday 15 February 2017

DRAW, COLOR AND COMPLETE

Shapes (FORME)	Names	Number of sides (LATI)	Number of corners (ANGOLI)
	TRIANGLE	THREE	THREE
	SQUARE	FOUR	FOUR
	RECTANGLE	FOUR	FOUR
	PARALLELOGRAM	FOUR	FOUR
	TRAPEZIUM (TRAPEZOID)	FOUR	FOUR
	RHOMBUS	FOUR	FOUR
	PENTAGON	FIVE	FIVE
	HEXAGON	SIX	SIX
	OCTAGON	EIGHT	EIGHT

## 2 D Shapes



- |               |               |           |             |
|---------------|---------------|-----------|-------------|
| triangle      | square        | rectangle | pentagon    |
| hexagon       | heptagon      | octagon   | equilateral |
| quadrilateral | right         | scalene   | rhombus     |
| regular       | irregular     | isosceles | circle      |
| oval          | parallelogram | trapezium | symmetrical |
| diagonal      | nonagon       | decagon   |             |

Wednesday

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February 2017

## TRIANGLES INFORMATION

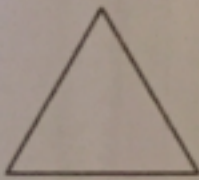
### PROPERTIES OF TRIANGLES

Triangles have the following properties:

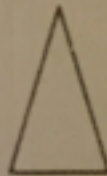
- All triangles have 3 straight sides, 3 ~~vertices~~ (vertices), and 3 angles.
- All triangles have angles adding up to  $180^\circ$ .

### TYPES OF TRIANGLES

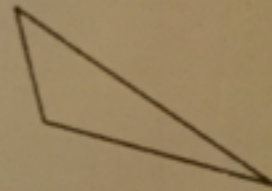
There are 3 main types of triangles:



Equilateral triangle



Isosceles triangle



Scalene triangle

#### ***Equilateral triangles***

An equilateral triangle has the following properties (in addition to the properties above):

- Three sides of equal length.
- Three angles of equal size which are all  $60^\circ$ .
- Three lines of symmetry.

#### ***Isosceles triangles***

An isosceles triangle has the following properties:

- Two sides of equal length.
- Two equal angles.
- One line of symmetry.

#### ***Scalene triangles***

A scalene triangle has the following properties:

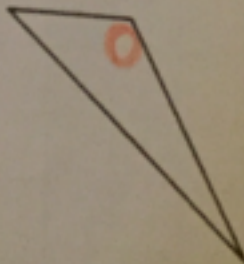
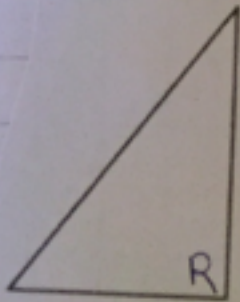
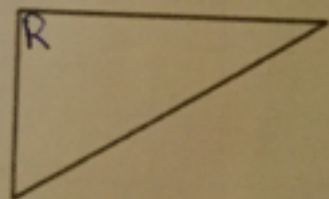
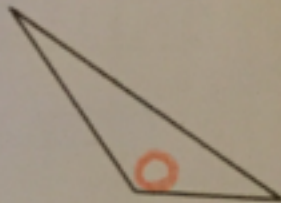
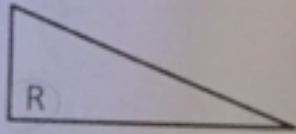
- No sides of equal length.
- No equal angles.
- No lines of symmetry.

1 ANGLE  
2 DEGREE  
3 SIDE  
4 LENGTH  
5 STRAIGHT

# IDENTIFY TRIANGLES SHEET 1

→ COLORA

- Equilateral triangles have all sides and angles equal. Shade these yellow.
- Isosceles triangles have 2 sides and angles equal. Shade these green.
- Right triangles have a right angle. Write an R inside these.
- Obtuse triangles have an obtuse angle. Write an O inside these.



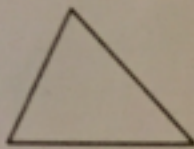
Name

Date

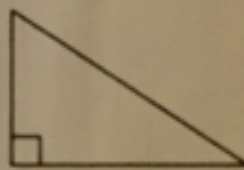


## ANGLES IN A TRIANGLE

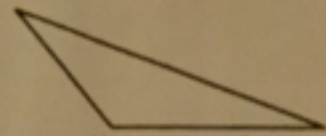
*In any triangle, all the angles add up to  $180^\circ$ .*



Acute triangle



Right triangle  
(or **right-angled triangle**)



Obtuse triangle

### **Acute triangles**

Acute triangles have **all** acute angles (angles **less than**  $90^\circ$ ).

It is possible to have an acute triangle which is <sup>ANCHE</sup> also an isosceles triangle – these are called acute isosceles triangles.

### **Right triangles (right-angled triangles)**

Right triangles have one right angle (equal to  $90^\circ$ ).

It is possible to have a right isosceles triangle – a triangle with a right angle and two equal sides.

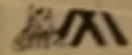
### **Obtuse triangles**

Obtuse triangles have one obtuse angle (angle which is **greater than**  $90^\circ$ ).

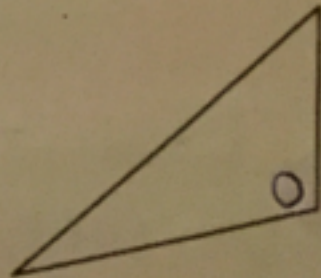
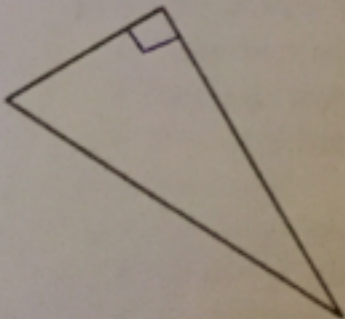
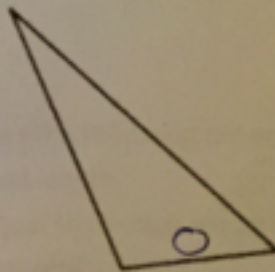
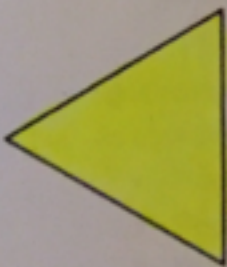
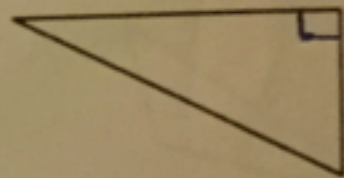
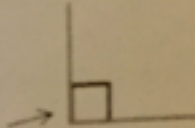
It is possible to have an obtuse isosceles triangle – a triangle with an obtuse angle and two equal sides.

ALSO  $\Rightarrow$  ANCHE  
LESS THAN  $\Rightarrow$  MINORI  
GREATER THAN  $\Rightarrow$  PIÙ GRANDE DI

## IDENTIFY TRIANGLES SHEET 2



- Shade the equilateral triangles yellow.
- Shade the isosceles triangles green.
- Mark the right angles with a small square.
- Write an 'O' inside all the obtuse angles.

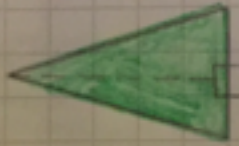
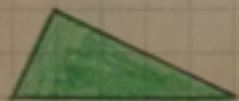


SCALENE

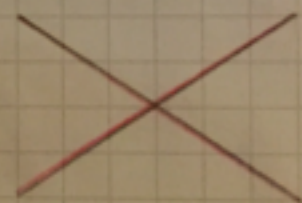
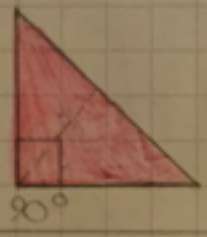
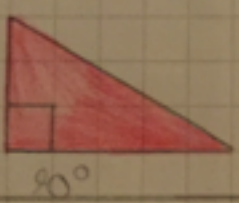
ISOSCELES

EQUILATERAL

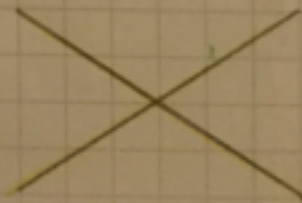
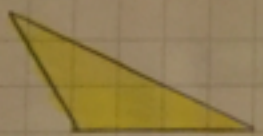
ACUTE



RIGHT

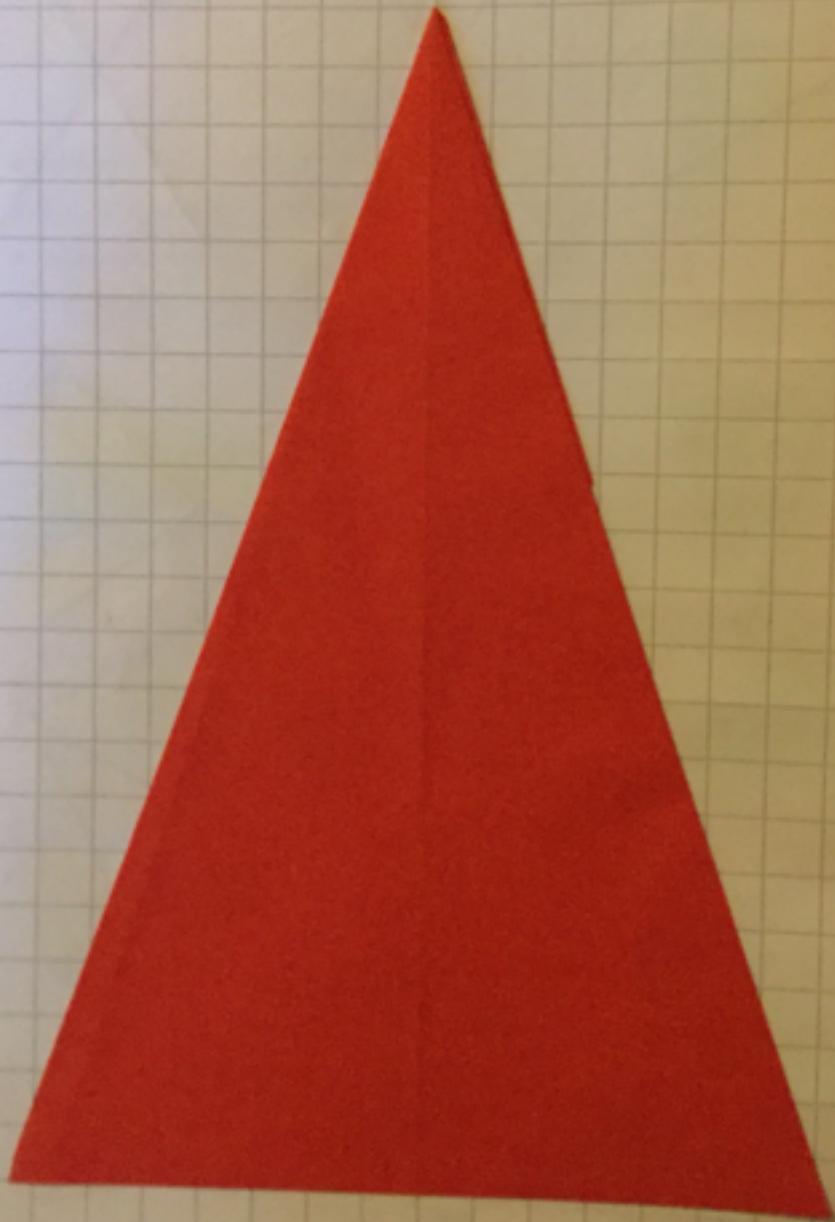


OBTUSE



1/03/2017 Wednesday 1 march

ISOSCELES TRIANGLE





# Quadrilaterals

**Parallelogram**

2 pairs of parallel sides

**Trapezium**

1 pair of parallel sides

**Irregular Quadrilateral**

No parallel sides

**Rectangle**

Parallelogram with right angles

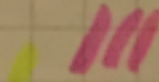
**Square**

Parallelogram with right angles and congruent sides

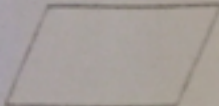
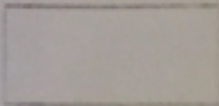

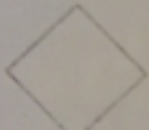
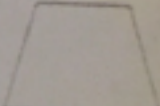
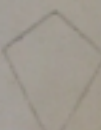
**Rhombus**

Parallelogram with congruent sides

Cut out and paste in appropriate shape.



# CLASSIFYING QUADRILATERALS

Type	Properties
Parallelogram 	<ul style="list-style-type: none"> <li>• OPPOSITE SIDES ARE EQUAL AND PARALLEL</li> <li>• OPPOSITE ANGLES ARE EQUAL</li> </ul>
Rectangle 	<ul style="list-style-type: none"> <li>• OPPOSITE SIDES ARE EQUAL AND PARALLEL</li> <li>• ALL ANGLES ARE RIGHT ANGLES (<math>90^\circ</math>)</li> </ul>
Square 	<ul style="list-style-type: none"> <li>• OPPOSITE SIDES ARE PARALLEL</li> <li>• ALL SIDES ARE EQUAL</li> <li>• ALL ANGLES ARE RIGHT ANGLES (<math>90^\circ</math>)</li> </ul>
Rhombus 	<ul style="list-style-type: none"> <li>• OPPOSITE SIDES ARE PARALLEL</li> <li>• ALL SIDES ARE EQUAL [OPPOSITE ANGLES ARE EQUAL]</li> <li>• DIAGONALS BISECT ONE ANOTHER AT RIGHT ANGLES (<math>90^\circ</math>)</li> </ul>
Trapezium 	<ul style="list-style-type: none"> <li>• ONE PAIR OF OPPOSITE SIDES IS PARALLEL</li> </ul>
Kite 	<ul style="list-style-type: none"> <li>• TWO PAIRS OF ADJACENT SIDES ARE EQUAL</li> <li>• ONE DIAGONAL BISECTS THE OTHER</li> <li>• DIAGONALS INTERSECT AT RIGHT ANGLES (<math>90^\circ</math>)</li> </ul>

Wednesday 15 March

## POLYGONS AND QUADRILATERALS

### VOCABULARY

**Polygon:** a closed 2D shape with three or **more straight** sides.

PIU RETTO

**Quadrilateral:** <sup>is</sup> a polygon with **exactly four** sides.

ESATTAMENTE

**Parallelogram:** a quadrilateral. Both pairs of opposite sides are parallel.

**Rectangle:** a quadrilateral. Both pairs of opposite sides are parallel and all the angles are right angles.

**Rhombus:** a quadrilateral. Both pairs of opposite sides are parallel and all the sides are the **same length**.

LONGHERZA

STESSA

**Square:** a quadrilateral. **Both** pairs of opposite sides are parallel, all the sides are the same length and all the angles are right angles.

ENTRAMPRE

**Trapezium:** a quadrilateral. One pair of opposite sides is parallel.

ADJACENTI

**Kite:** a quadrilateral. Two pairs of **adjacent** sides are the same length.

### Let's investigate

What can you see in the **pattern** below?

MODELLO

SOTTO

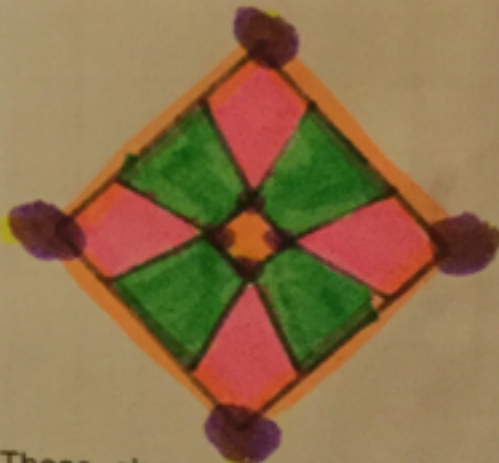
How many:

• **squares?** ..TWO.....

• **trapeziums?** ..FOUR.....

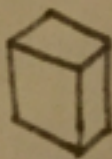
• **right-angles?** ..EIGHT.....

• **kites?** ..FOUR.....



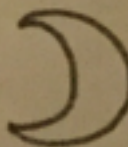
These shapes are not polygons. Give **at least** one **reason** why **each** of shapes is not a polygon.

a.



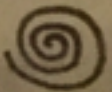
NOT 2D

b.



NO STRAIGHT SIDES

c.



NOT CLOSED

## Remember

**Polygons** are straight-sided closed shapes. The polygon is **regular** if all the sides are of equal length and all the angles are the same **size**. **GRANDEZZA**

## Quadrilaterals

Square: 4 equal sides, 4 right angles

Rectangle: 2 pairs of equal sides, 4 right angles

Rhombus: 4 equal sides, opposite sides equal and parallel

Parallelogram: Opposite sides equal and parallel




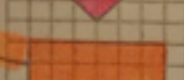
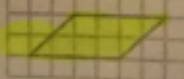
Trapezium: One pair of parallel sides of different lengths

Kite: Adjacent sides equal, one pair of opposite angles equal

## Vocabulary

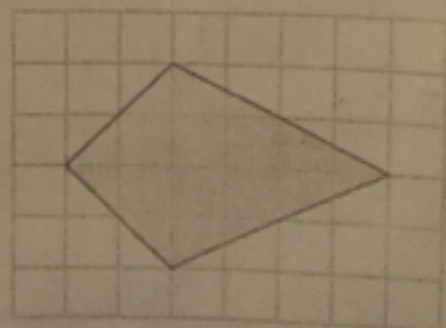
polygon, quadrilateral,  
rhombus, parallelogram,  
trapezium, kite

- 1 Match each quadrilateral to the correct description.  
One has been done for you.

Description	Quadrilateral
Opposite sides are equal and parallel	
Only one pair of parallel sides	
Four equal angles, opposite sides are equal and parallel	
All sides are equal, all angles are right angles	
Adjacent sides are equal, one pair of opposite angles is equal	

- 2 Here is a shape on a **grid**. **GRIGLIA**  
For each **statement** put a tick (✓) if it is true.  
Put a cross (X) if it is not true.

- The shape is a quadrilateral.
- The shape is a parallelogram.
- The shape has 1 right angle.
- The shape has 2 lines of symmetry.



Wednesday

22

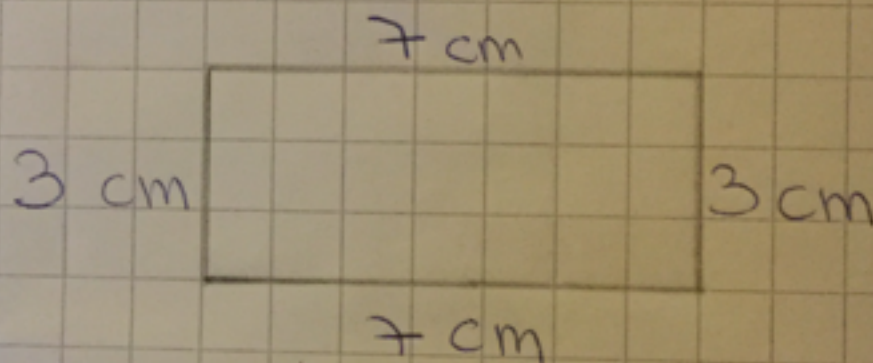
March

## PERIMETER

Perimeter is the distance around a two-dimensional

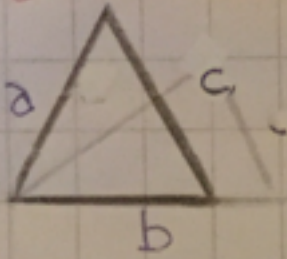
EXAMPLE: the perimeter of this rectangle is

$$7 + 3 + 7 + 3 = 20 \text{ cm}$$



# PERIMETER FORMULAS

Triangle



$$\text{Perimeter} = a + b + c$$

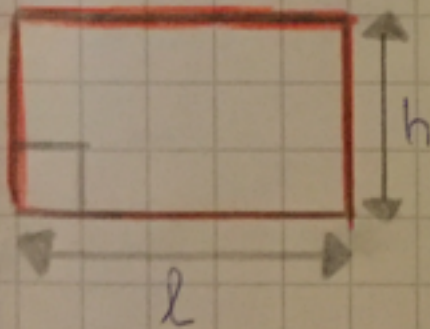
Equilateral =  $l \times 3$



Square

$$\text{Perimeter} = 4 \times a$$

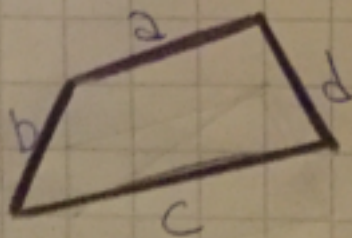
$a = \text{length of side}$



Rectangle

$$\text{Perimeter} = 2 \times (l + h)$$

$h = \text{height}$     $l = \text{LENGTH}$

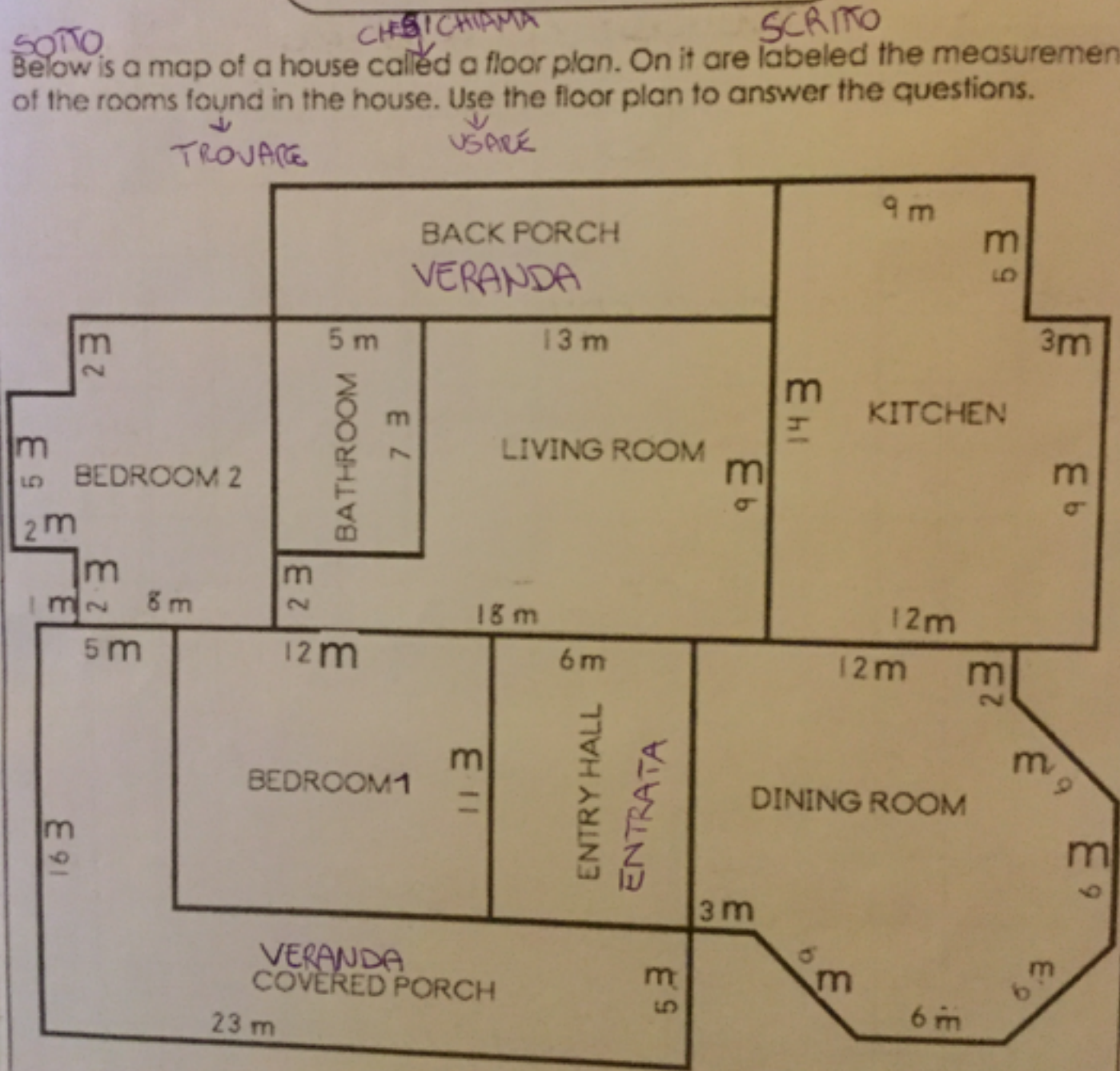


Quadrilateral

$$\text{Perimeter} = a + b + c + d$$

# Perimeter of a House

Below is a map of a house called a floor plan. On it are labeled the measurements of the rooms found in the house. Use the floor plan to answer the questions.



## Perimeter of a House

1. What is the perimeter of the kitchen?

$$9+5+12+3+9+14=52 \text{ m}$$

2. What is the perimeter of the bathroom?

$$(7+5) \times 2 = 24 \text{ m}$$

3. What is the perimeter of bedroom 1?

$$(12+11) \times 2 = 46 \text{ m}$$

4. What is the perimeter of the dining room?

$$(6 \times 5) + 12 + 2 + 3 + 11 = 58$$

5. What is the perimeter of the VERANDA?

$$(23+16) \times 2 = 78 \text{ m}$$

6. What is the perimeter of bedroom 2?

$$(10+8) \times 2 = 38 \text{ m}$$

7. What is the perimeter of the entry hall?

$$(6+11) \times 2 = 34 \text{ m}$$

8. What is the perimeter of the living room?

$$(18+9) \times 2 = 54 \text{ m}$$

9. What is the perimeter of the VERANDA?

$$(18+5) \times 2 = 46 \text{ m}$$

**\*CHALLENGE\*** What is the perimeter of the outside of the house (including porches)?

$$52+24+46+58+$$

$$78+38+34+54+46+$$

$$58 = 430 \text{ m}$$



Wednesday 29 march

OF-DI

# GEOMETRY QUIZ

? QUESTIONS  
MARK

1. WHICH SHAPE IS NOT A POLYGON?
2. WHICH TRIANGLE IS SCALENE?
3. WHICH TYPE OF POLYGON HAS FOUR RIGHT ANGLES?
4. WHICH SHAPE IS A QUADRILATERAL?
5. HOW MANY RIGHT ANGLES DOES THIS SHAPE HAVE?  
10
6. WHAT IS THE EXACT DEFINITION OF QUADRILATERAL?
7. MATCH THE NAME WITH THE SHAPE
8. WHICH SHAPE IS A PENTAGON?
9. MATCH THE TRIANGLES WITH THE CORRECT NAMES
10. " "
11. WHICH SHAPE DOESN'T HAVE SIDES OR ANGLES?
12. WHICH SHAPE IS A RHOMBUS?
13. WHICH SHAPE IS NOT A TRAPEZIUM?

/ INVERTED COMMA
^ CIRCUMFLEX
••••• ELLIPSIS
• FULL STOP
^ COMMA
: COLON
: SEMI COLON
- HYPHEN
^ MARK
! EXCLAMATION

14. WHICH OF THESE SHAPE IS REGULAR?

15. CHOOSE THE RIGHT-ANGLE TRIANGLE.

16. CALCULATE THE PERIMETER OF THIS SHAPE.

17. " " ... HOUSE.

18. HOW MANY RECTANGLES ARE THERE IN THIS PATTERN?

19. WHICH OF THESE SHAPES IS IRREGULAR?

20. CHOOSE THE CORRECT DEFINITIONS.

21. TRUE OR FALSE?

22. WRITE THE FORMULA FOR THE PERIMETER OF THIS RECTANGLE.

23. CHOOSE THE CORRECT DEFINITIONS OF PERIMETER.

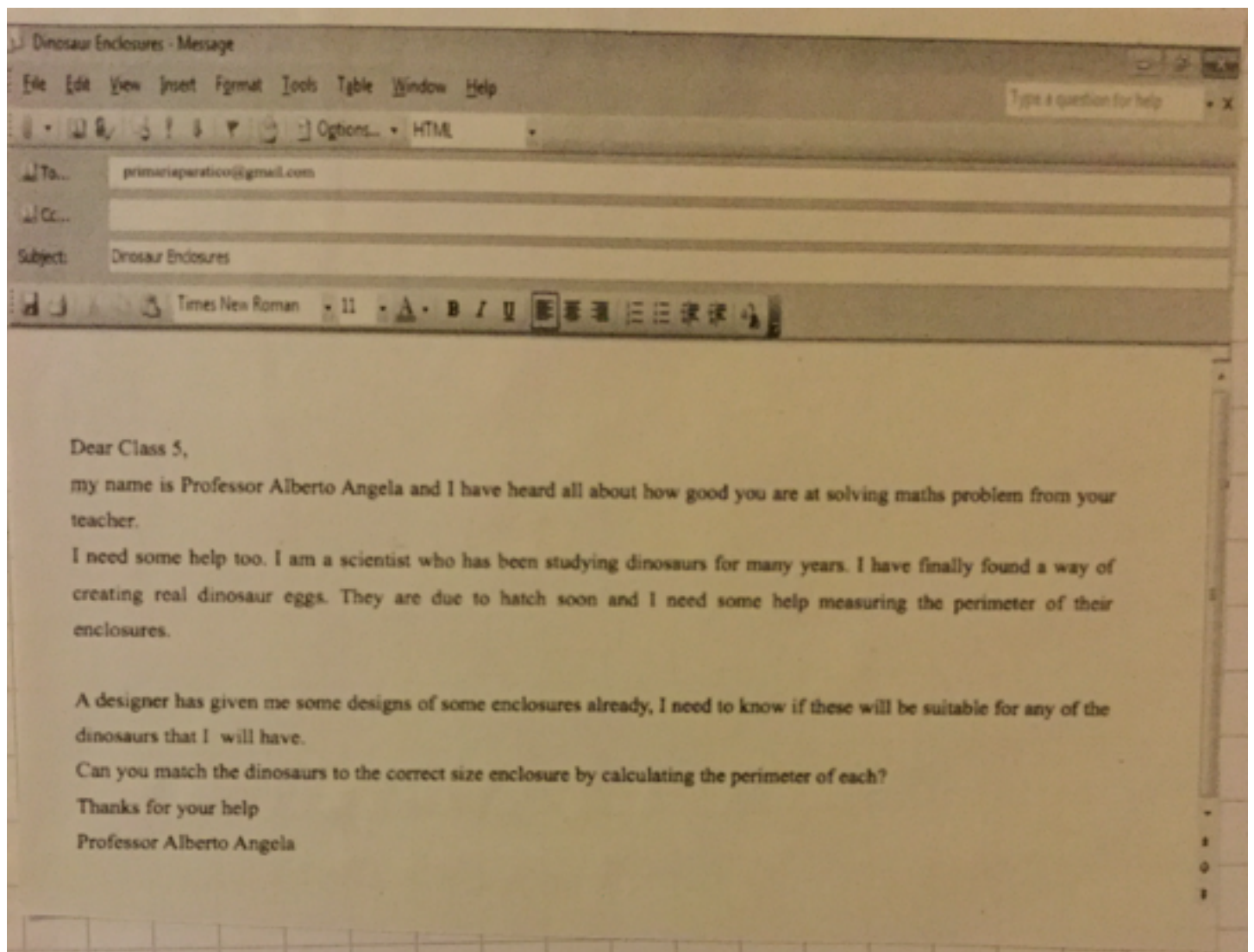
24. COMPLETE THE PUZZLE.

25. WHICH SHAPE MOST RESEMBLES A SQUARE?

Friday 24 March

## QUESTIONS

- ① WHICH SHAPE IS NOT A POLYGON? GIULIA BONARDI
- ② MATCH EACH SHAPE WITH THE CORRECT NAME? MOHAMED
- ③ WHICH SHAPE IS AN ISOSCELESTRANGLE? LEONARDO
- ④ WHICH SHAPE IS A QUADRILATERAL? MICHÉ
- ⑤ WHICH SHAPE IS NOT A TRAPEZIUM? CRISTIAN
- ⑥ CIRCLE THE ODD ONE OUT. GIORGIO
- ⑦ MATCH EACH TRIANGLE WITH THE CORRECT NAME (EQUILATERAL, ISOSCELES, SCALENE). BARBARA
- ⑧ RECONSTRUCT THE PENTAGON. LUCA
- ⑨ HOW MANY RHOMBI ARE THERE IN THE SHAPE. MATILDE
- ⑩ WRITE THE NAME OF THIS SHAPE. DANIELE
- ⑪ WHICH SHAPE DOESN'T HAVE ANGLES OR SIDES? GAIA
- ⑫ WHICH SHAPE HAS FOUR RIGHT ANGLES? HADDY
- ⑬ COMPLETE THE PUZZLE.
- ⑭ MATCH EACH TRIANGLE WITH THE CORRECT TERM (ACUTE-ANGLE, RIGHT-ANGLE, OBTUSE-ANGLE)
- ⑮ MATCH EACH SHAPE WITH THE CORRECT DEFINITION.
- ⑯ CALCULATE THE PERIMETER OF THE SHAPE.
- ⑰ FORM A SQUARE WITH THREE TRIANGLES.
- ⑱ FIND THE SHAPE WITH FIVE EQUAL SIDES.
- ⑲ TRUE OR FALSE?
- ⑳ CHOOSE THE CORRECT DEFINITION OF PERIMETER
- ㉑ CHOOSE THE CORRECT PERIMETER.
- ㉒ CALCULATE THE PERIMETER OF THE GARDEN
- ㉓ MATCH EACH DEFINITION WITH THE CORRECT SHAPE



Solve problems involving perimeter.

Drawings of different dinosaur enclosures have been given to Professor Angela. He needs to know which enclosures will fit the different dinosaurs. Can you help him by calculating the perimeter of each enclosure? Write inside each enclosure which dinosaurs could fit.

Stegosaurus needs a cage with a perimeter fence of at least 50 m



T-Rex needs an enclosure of exactly 100 m perimeter.



Triceratops needs a cage with a perimeter bigger than 50 m but smaller than 100 m



Brontosaurus needs a perimeter fence bigger than 100 m



Baryonyx needs a cage with a perimeter fence between 80 m and 95 m



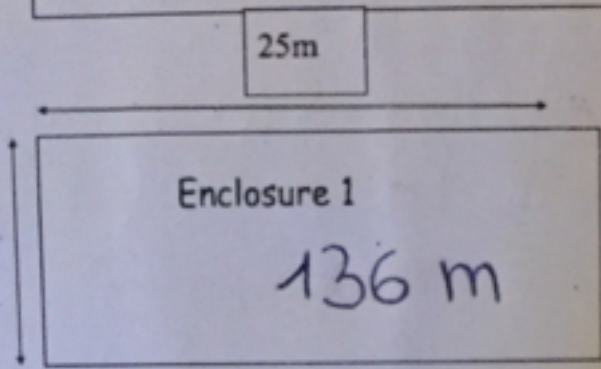
Velociraptor is a small dinosaur and needs a cage with a perimeter of less than 50 m



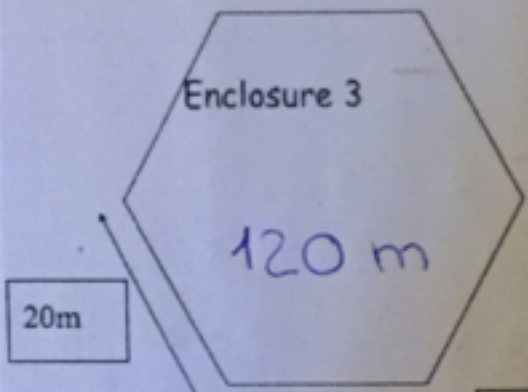
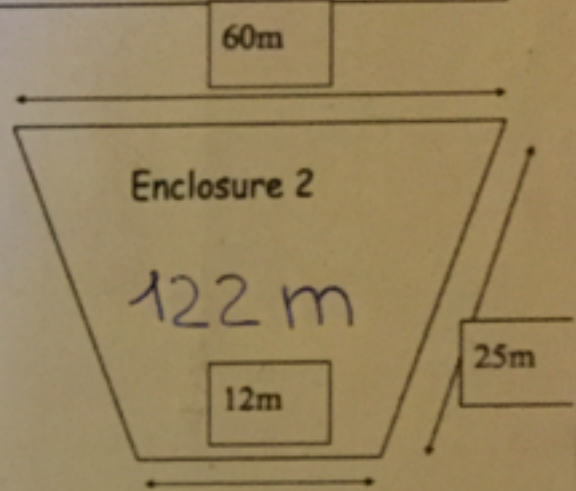
Solve problems involving perimeter.

Perimeter =

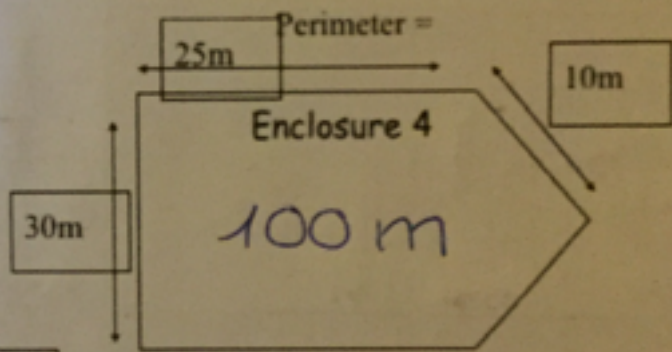
**\*REMEMBER\*** Show your working out in your maths book.



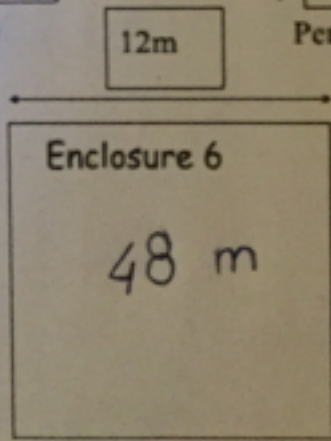
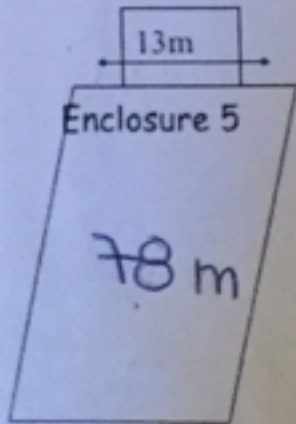
Perimeter =



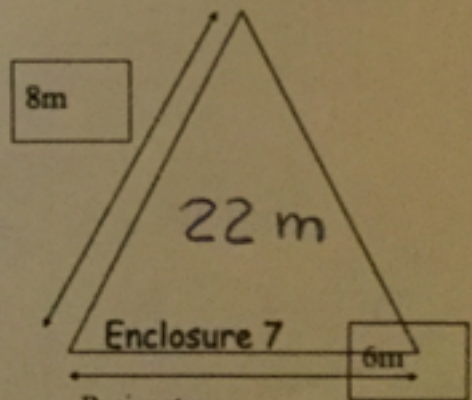
Perimeter =



Perimeter =




Perimeter =



Perimeter =



# Island Conquer

TEAM 1 SUSHI 

TEAM 2 SALSICIE 