



Polygons

Properties (characteristics)

no. vertices

no. sides

no. angles

equal in length?

some sides equal in length.

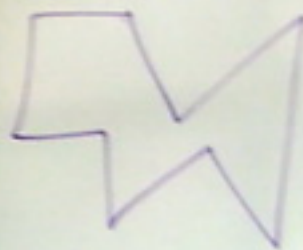
is there a right angle?

are they all equal

are some equal

sum of the angles

parallel sides.



diagonals?

Polygons

Properties

- How many sides?
 - are they all equal?
 - are some equal?
 - are they all different
- Are any pairs of sides parallel?
- Angles - measure all the angles — are any, all or some the same?
- Find the sum of the angles.
- Are there any right angles?



Polygon Pages

Quadrilateral (scalene)

Polygon Pages

K20

Billabong
Australia

Polygons Investigation

How many sides does your shape have?

Measure all the angles - are there any right angles?

Are any, all or some the same?

Measure the side lengths

Are any all or some the same?

Are there any pairs of parallel sides?

Find the sum of the angles

6. Any other interesting features about your shape(s)?

PERIMETER?

< 90 Acute

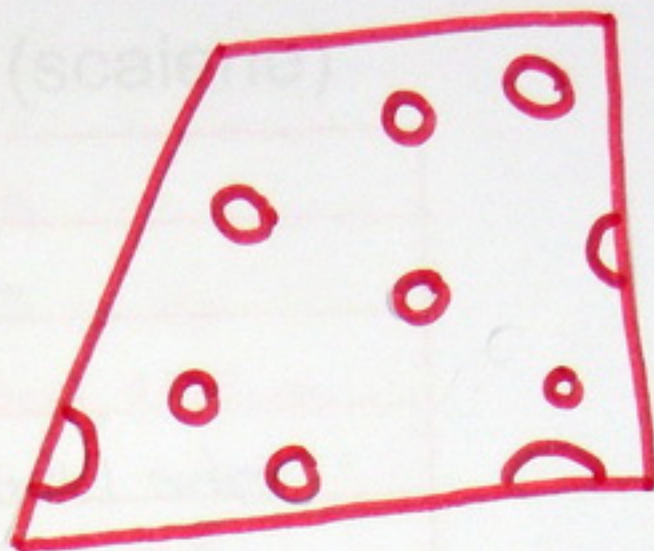
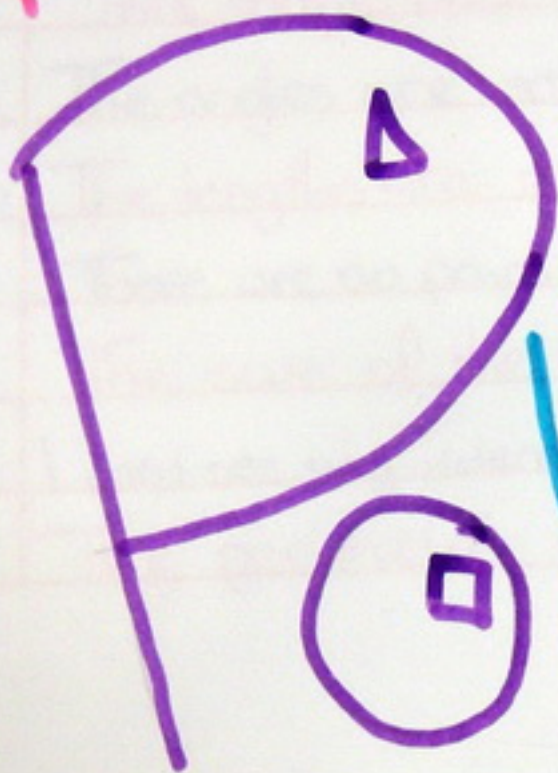
$> 90 < 180$ Obtuse

Reflex > 180

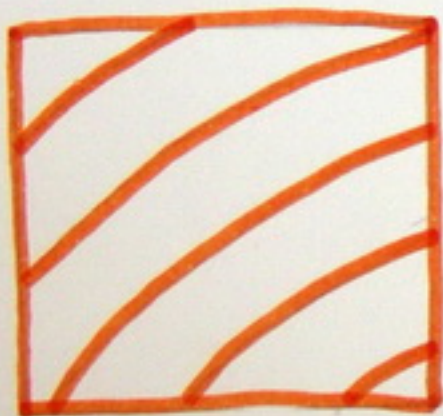
Kea Nixon

7A

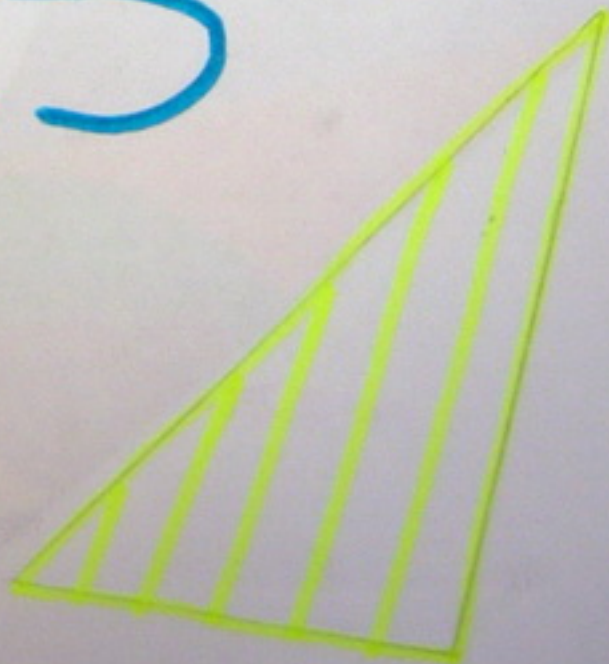
Triangle (scalene)



Polygon



Pages



Polygon Pages

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Square



Make notes here:

- Q1: This square is a 4 sided shape.
Q2: All the angles are 90° angles!
Q3: All the sides are 11.5 cm long!
Q4: This shape has 2 sets of parallel sides.
Q5: All the angles together equal 270° !

Acute Obtuse
right

Polygon Pages

NAME Brinley Ling

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Form 1A

Triangle (scalene)

Perimeter

The total of the perimeter is 54cm

Angles

There are 3 angles 2 Acutes and 1 obtuse.

Total

The total of all my angles is 180° .

Sides

This shape has Three Sides.

Right angle

There are no right angles.

Equal

There are no equal sides on this shape.

Acute angles 30°

25.5cm

13cm

Fun Fact

every triangles angles must equal 180° up to

127°

obtuse angle

15.5cm

23°

~~This is a 25~~

acute angle

Make notes here:

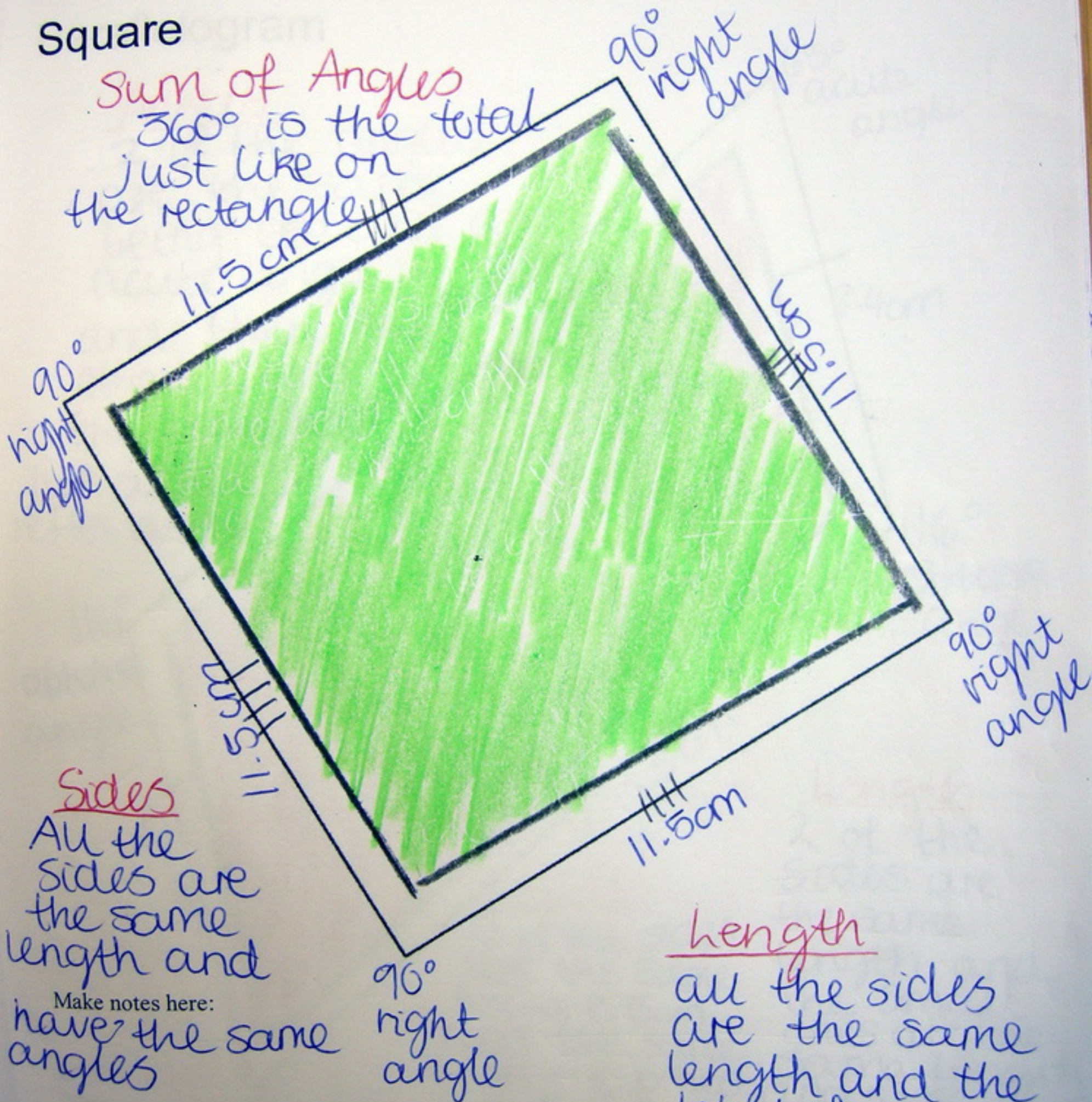
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Square

Sum of Angles

360° is the total
just like on
the rectangle



Sides

All the
sides are
the same
length and

Make notes here:
have the same
angles

Angles

all of the angles
are 90° and are all
right angles.

Length

all the sides
are the same
length and the
total of the
perimeter is 46cm.

Polygon Pages

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Kite



Make notes here: Sides 4

Equal sides yes

Parallel no

Angles same 2

Sum of angles 360

SoSees Trapezium.

1 This shape has 4 sides.

2 $130^\circ, 130^\circ, 50^\circ, 50^\circ$, This shape has no right angles and no pairs or parallel sides

3 $1.5\text{cm}, 11.5\text{cm}, 11.5\text{cm}, 22.5\text{cm}$
Only 2 sides are the same length.

4 This shape has no pairs or parallel sides

5 All of the angles add up to 360°



Triangle (scalene)

The total of the perimeter is 54.5 cm

25.5 cm

15 cm

13.5 cm

Polygon Pages

ADASE Bronte
Form - 7A

Pentagon (regular)

105° Angle
Obtuse

9.6 cm

110° Angle
Obtuse

9.6 cm

110° Angle
Obtuse

9.6 cm

9.6 cm

Some sides go diagonally and some go horizontal and some vertical

All angles are Obtuse

110° Angle
Obtuse

9.6 cm

110° Angle
Obtuse

9.6 cm

110° Angle
Obtuse

9.6 cm

110° Angle
Obtuse

9.6 cm

110° Angle
Obtuse

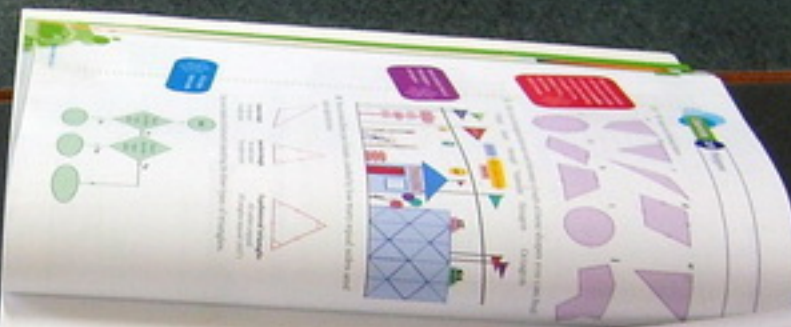
9.6 cm

The total of all the sides is 48

1.81

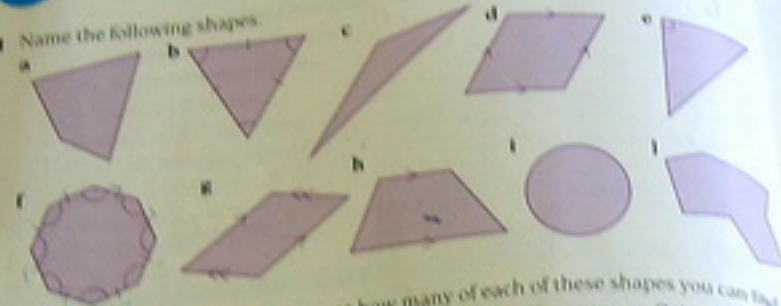
32.00W 10.32 AM

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



Exercise 2.01 Polygons

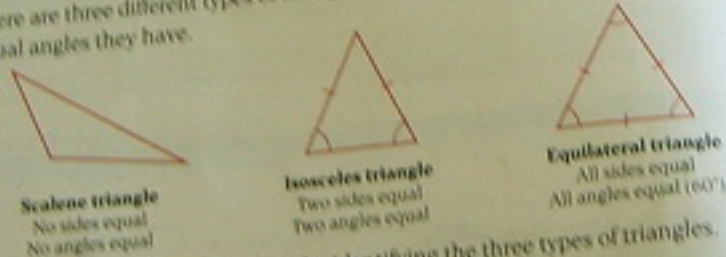
1 Name the following shapes.



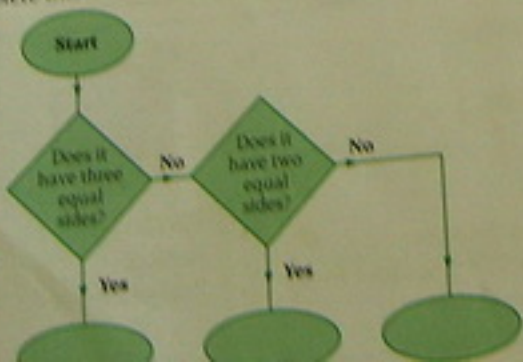
2 Look at the diagram below and count how many of each of these shapes you can find.
Triangle Square Rectangle Trapezium Hexagon Octagon



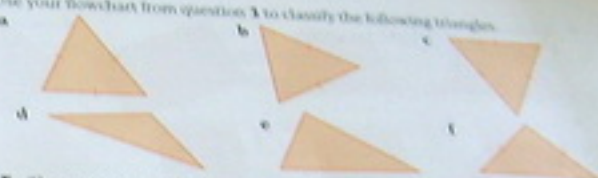
3 There are three different types of triangles, classified by how many equal sides and equal angles they have.



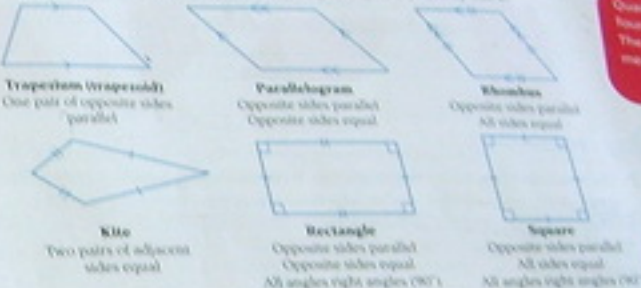
Copy and complete this flowchart for identifying the three types of triangles.



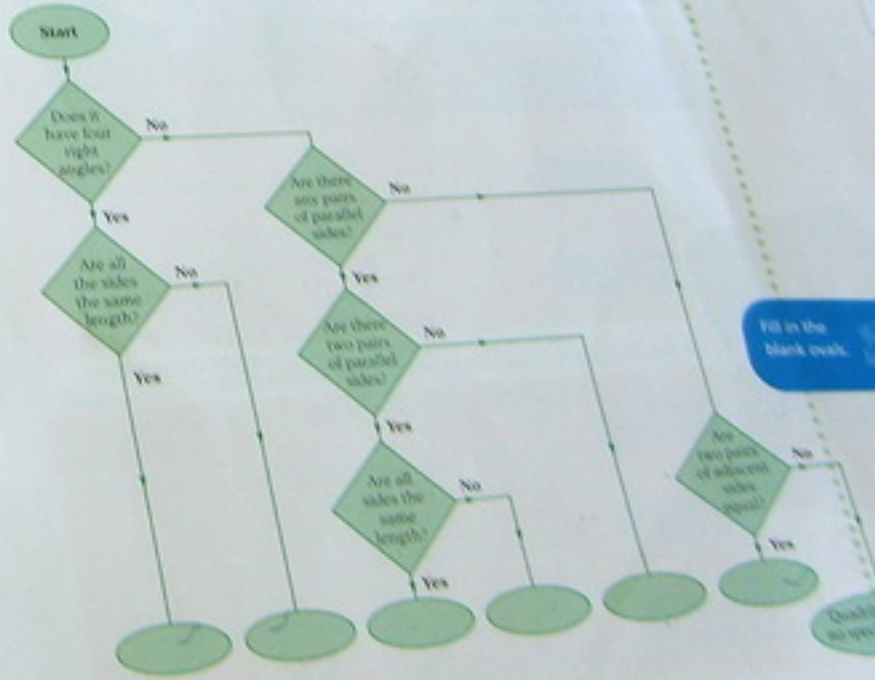
4 Use your flowchart from question 3 to classify the following triangles.



5 There are six different types of quadrilaterals with special names, classified by how many parallel sides, equal sides and right angles (90°) they have.



Copy and complete this flowchart for identifying the six types of quadrilaterals.



Sides that are marked with the same number of arrows are parallel. Look up the meaning of 'parallel' in the glossary if you don't know what it means.

Look carefully. Not all the polygons are regular.

Quadrilaterals are four-sided polygons. The Latin word 'quad' means four.

Adjacent means 'next to'.

Fill in the blank oval.