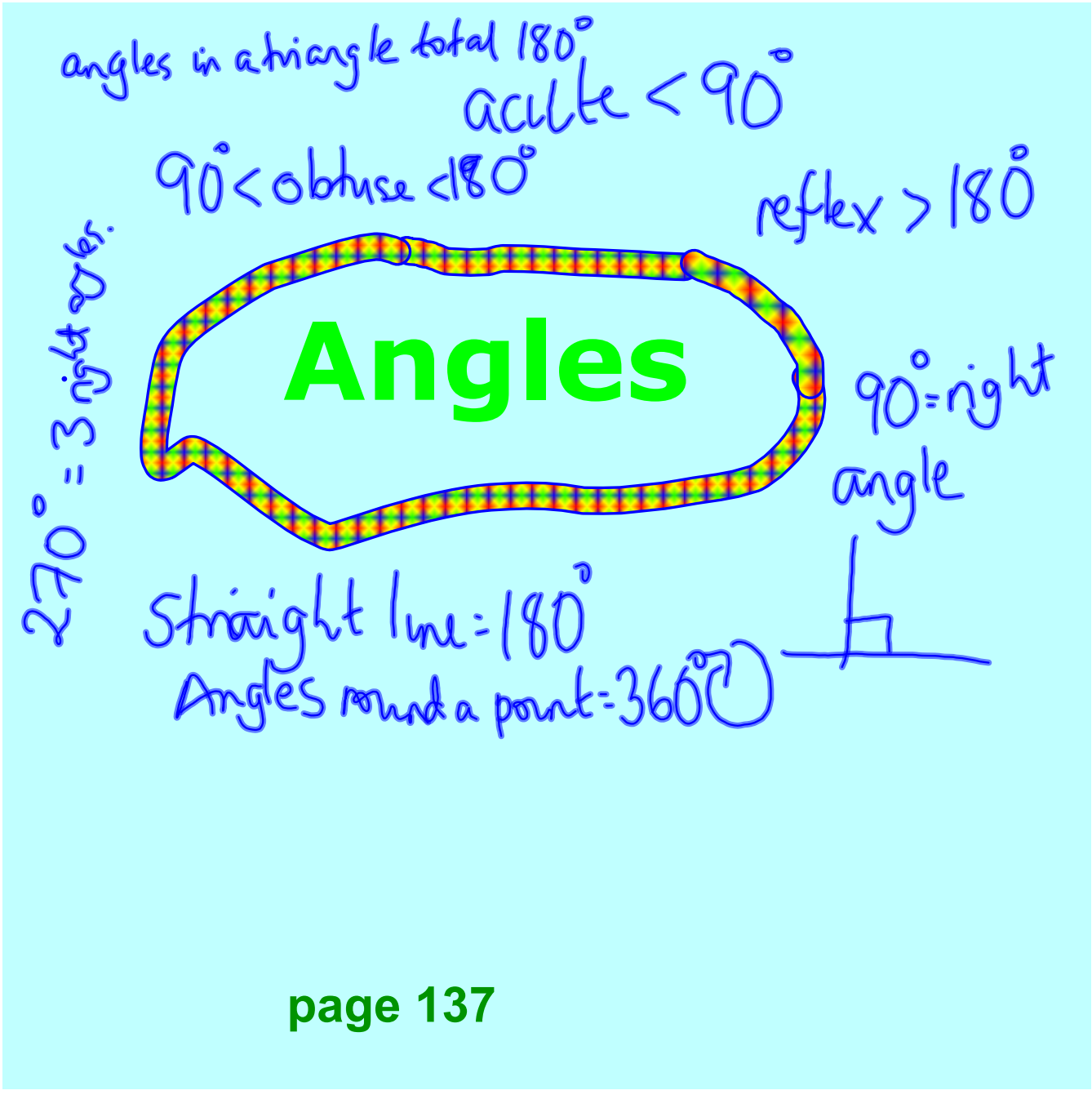
angles in a triangle total 180°
acute < 90°
90° < obtuse < 180°
reflex > 180°
270° = 3 right angles.
Angles
90° = right angle
Straight line = 180°
Angles round a point = 360°

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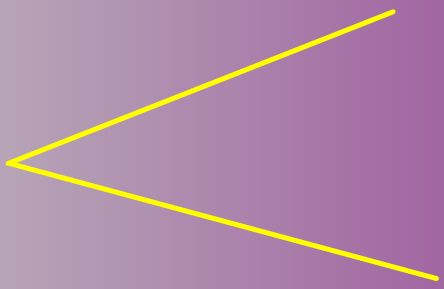
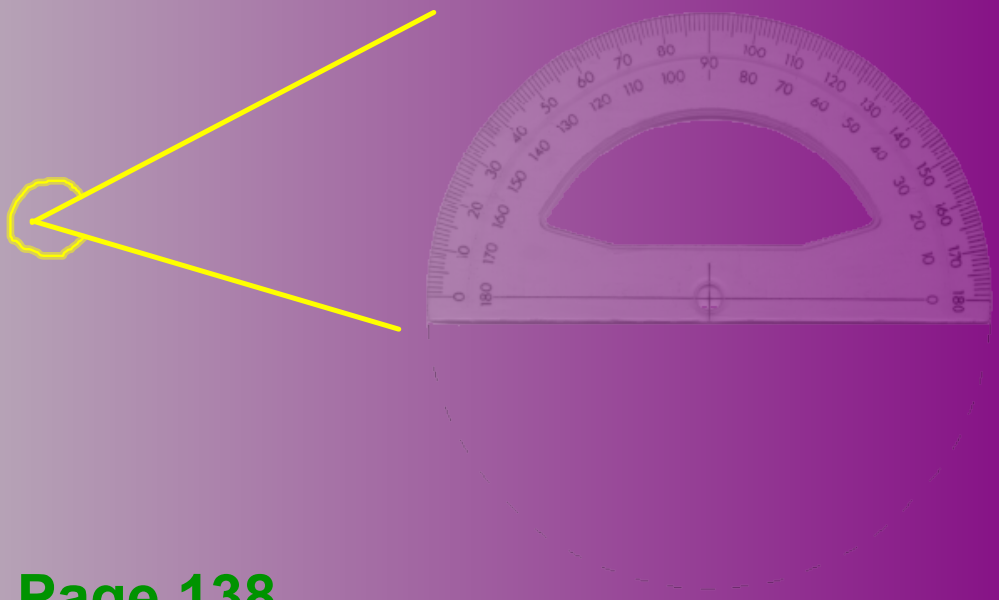
Measuring Angles (no angels please)

Types of Angle:





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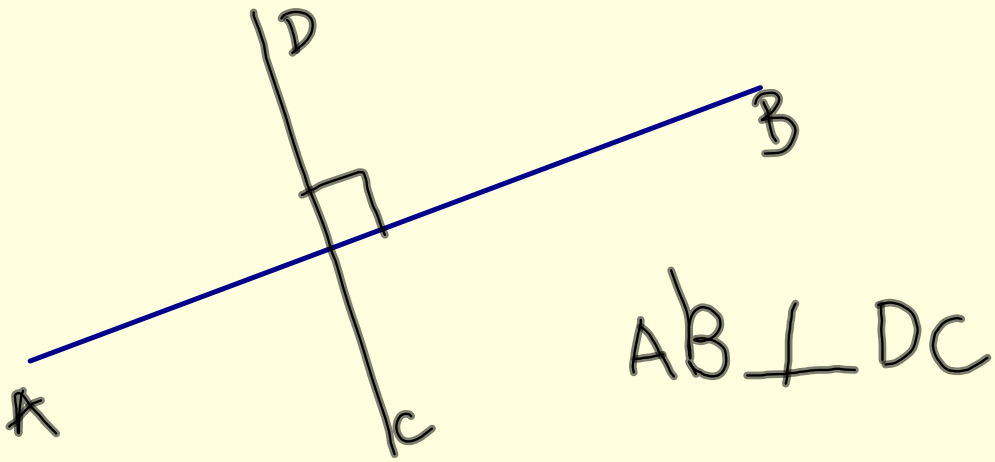
Angles

Take some scrap paper.
Fold to make a straight line.
Fold again to make a 45^0 angle.
Use that to help you estimate..

size	my actual	fred's actual	my points	fred's points

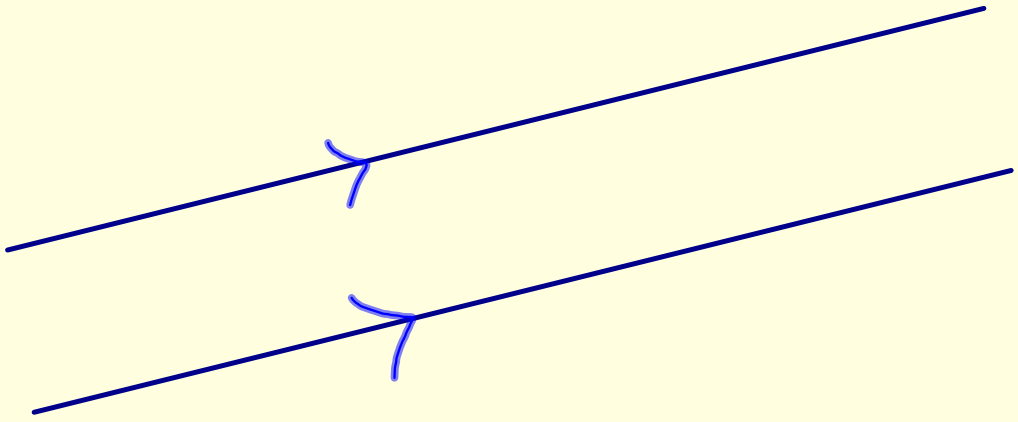
page 139 qu 4 bottom row only

Perpendicular lines



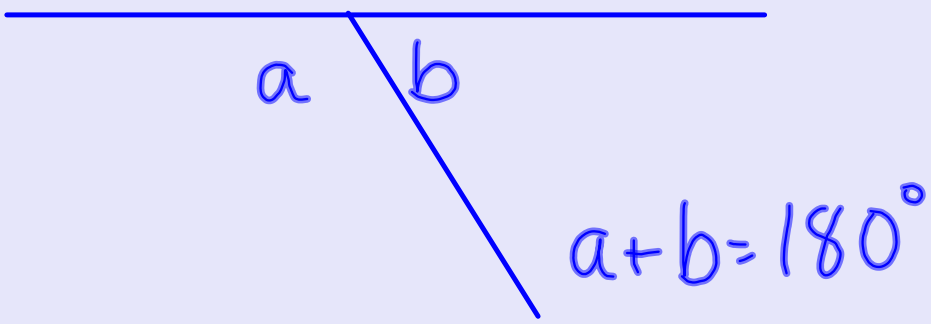
Lines that are perpendicular are at right angles to each other

Parallel Lines



Lines that are parallel never meet. They are like train tracks.

Angles and straight lines



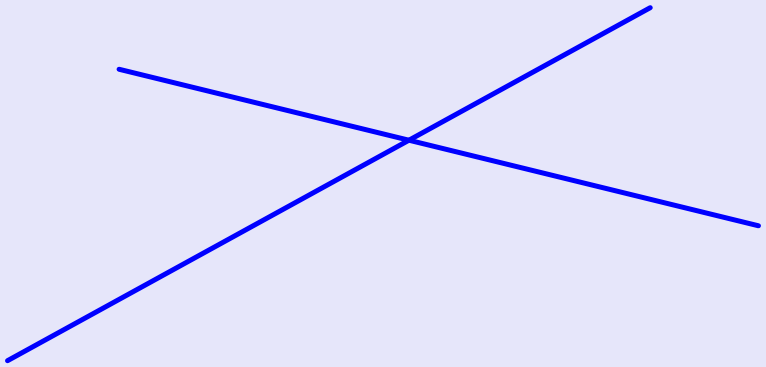
Angles on a straight line total 180^{o}

Angles round a point total 360^{0}.

page 139 ex 7.3

Vertically opposite angles

In your book draw two intersecting lines.
Measure all 4 angles.



Vertically opposite angles are equal.

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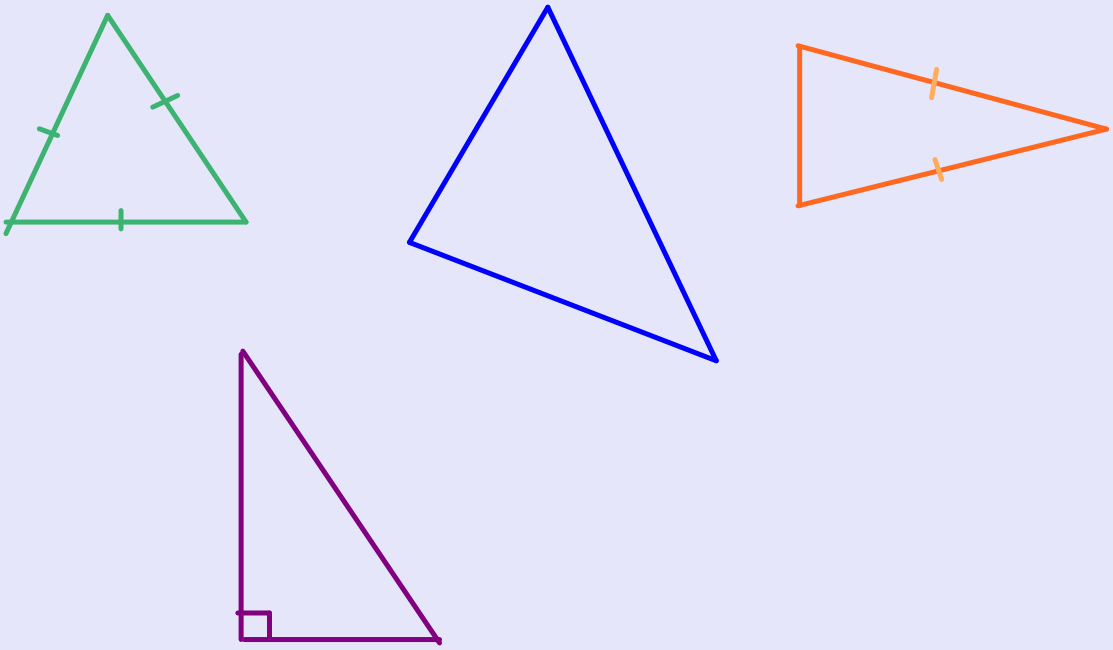
Demonstrate on geometers sketchpad

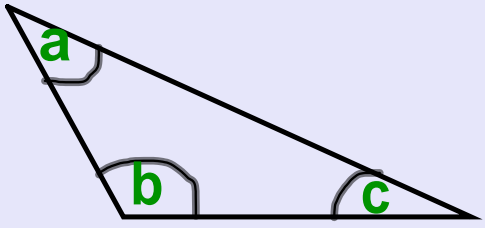
Triangles

Can you name 4 different types of triangle?



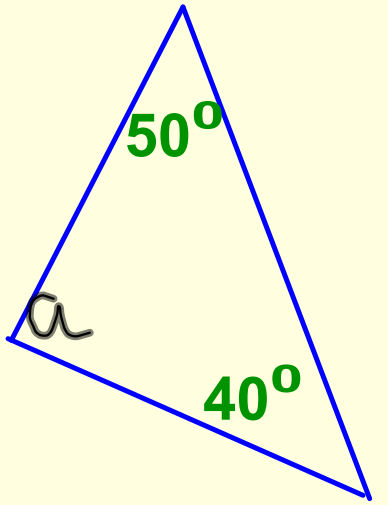
Angles in a triangle

On scrap paper make a triangle..

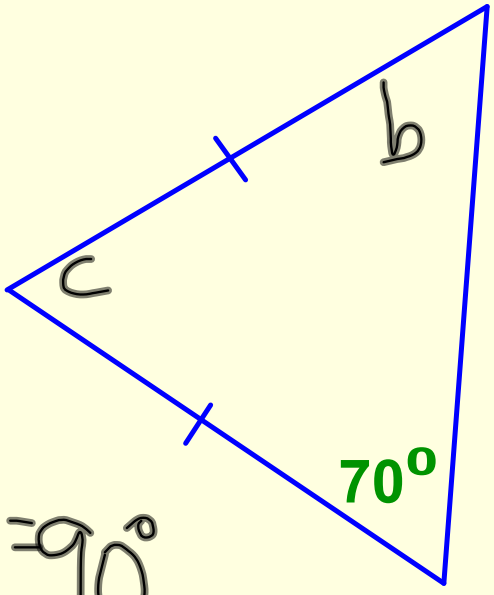


Angles in a triangle total....

Find the size of the missing angles

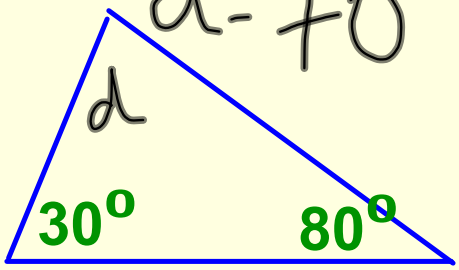


a = 90°

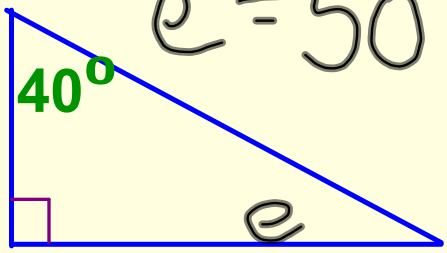


b = 70°

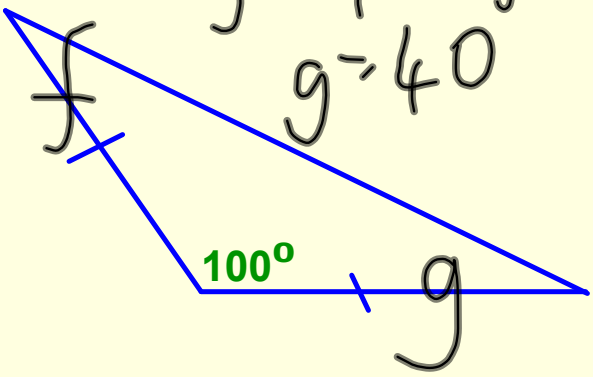
c = 40°



d = 70°

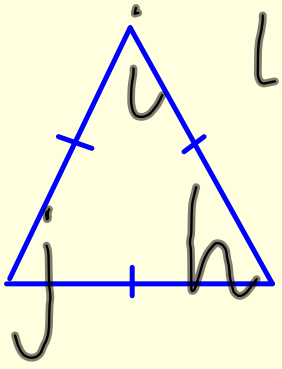


e = 50°



f = 40°

g = 40°



i = j = h = 60°

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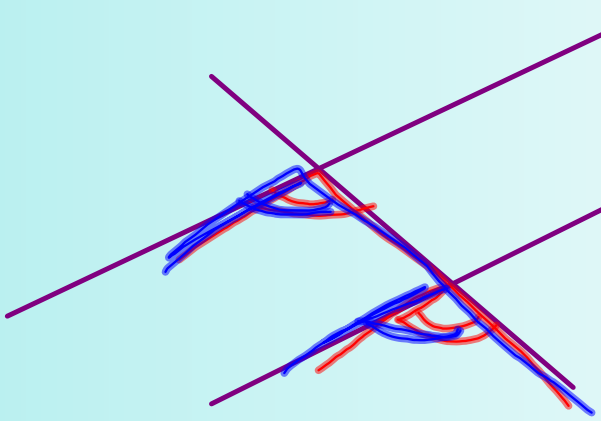
Parallel lines



Corresponding angles

Measure all 8 angles

Corresponding angles are equal

Alternate angles are equal.

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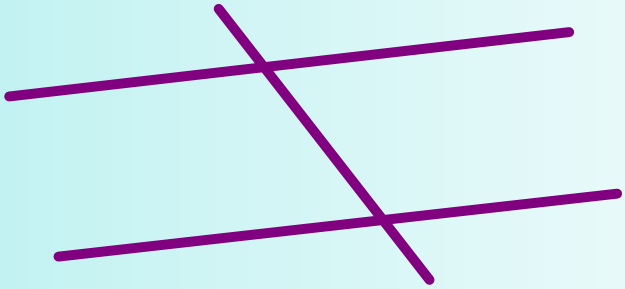
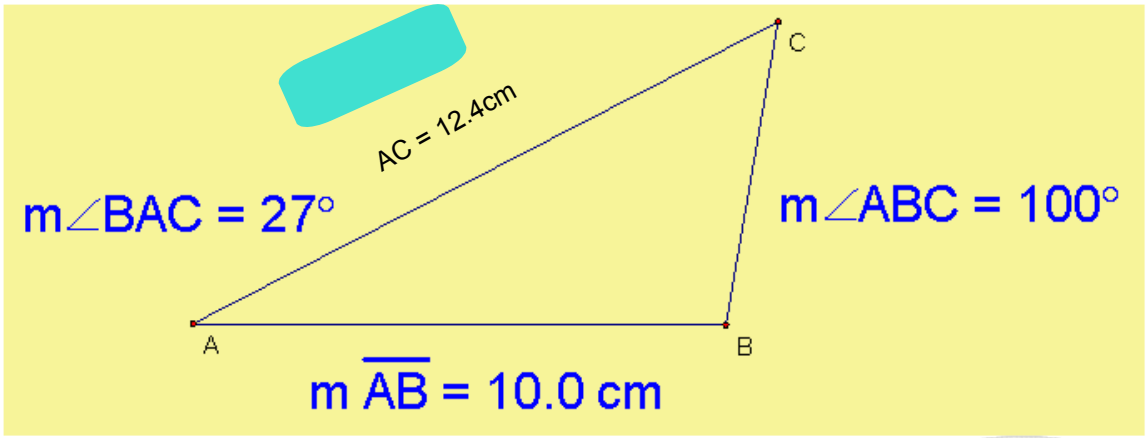
Page 145 Ex 7.7

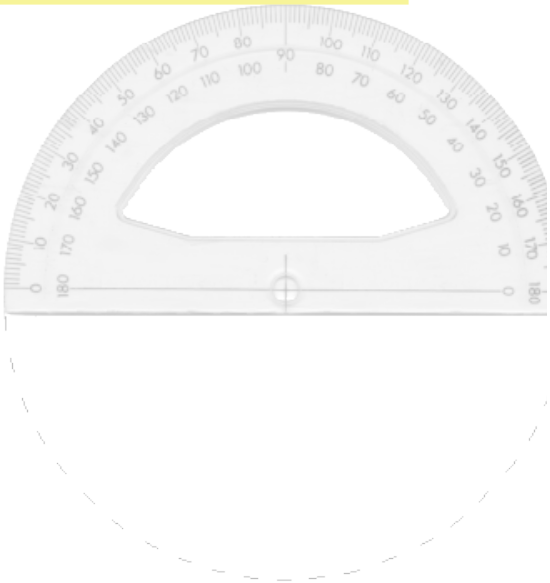


Constructing triangles

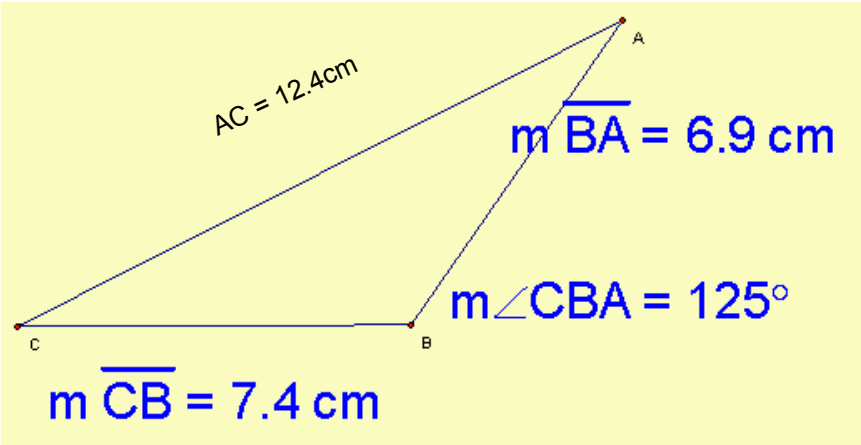
You will need: a protractor, a ruler and pencil.

1. One side and 2 angles



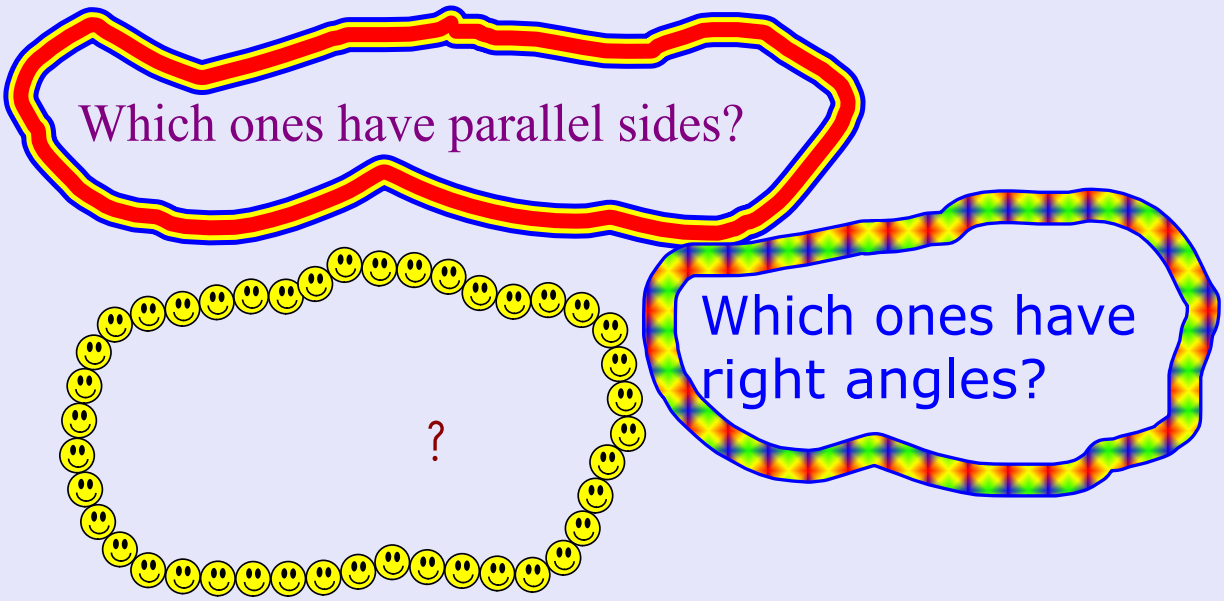


2. 2 sides and an angle



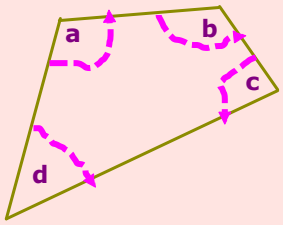
Quadrilaterals

Working in pairs how many different ones can you name and draw? There are 7!



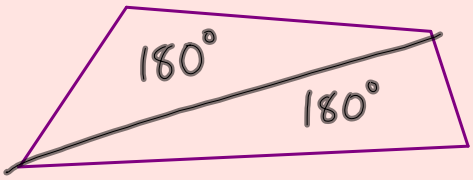
Quadrilaterals

On paper draw a quadrilateral. Mark the 4 angles a,b,c,d.
Tear them from the shape and put them together.



Tear along the dotted lines!

Proof that the angle sum of a quadrilateral is 360^{o}



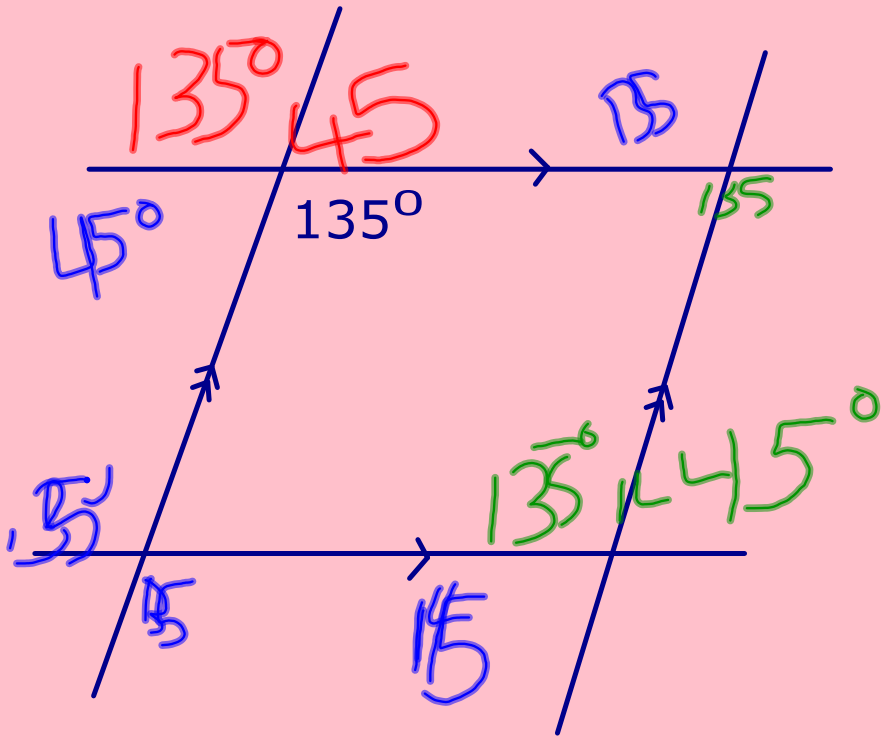
Because a triangle has 180°, and a quadrilateral can be divided into 2 triangles The angle sum of a quadrilateral is 360°

Draw a pentagon.
Find out the angle sum of a pentagon.
Do the same for the other polygons:

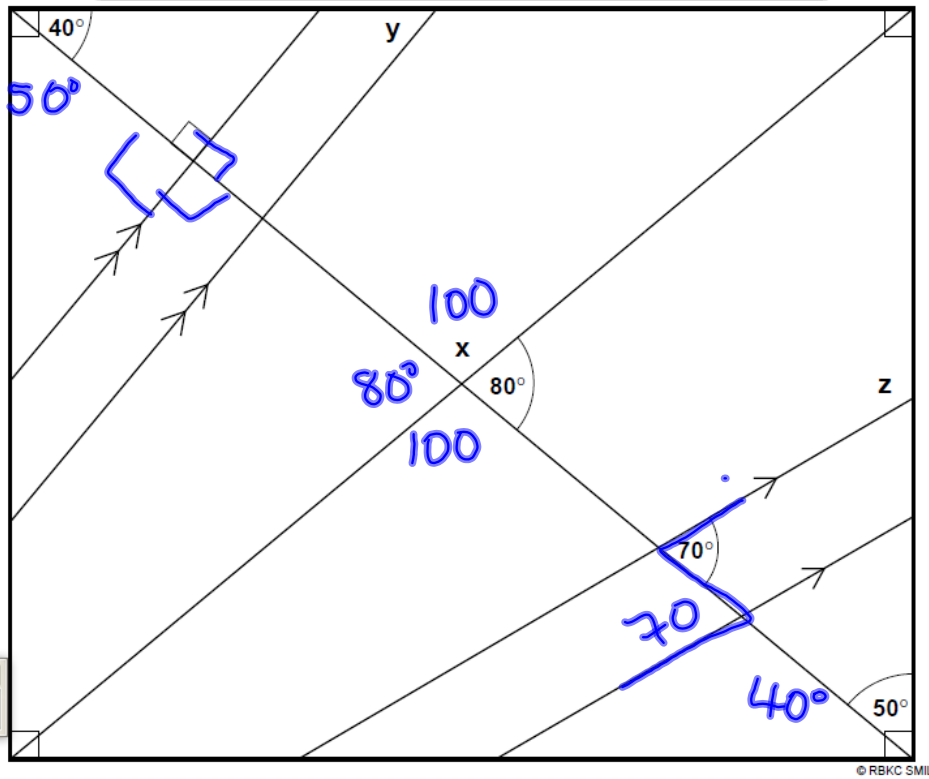
Name	no of sides	no of triangles	Angle sum
	3		
	4		
	5		
	6		
	7		
	8		

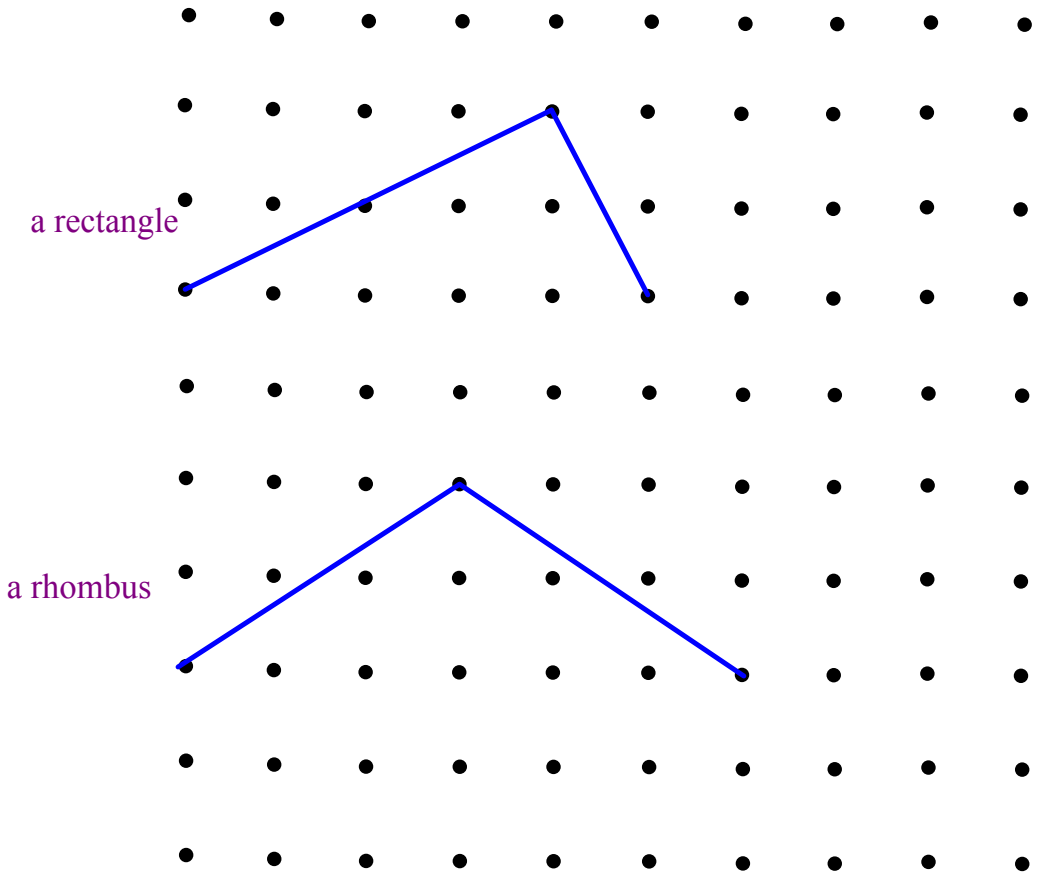
Extension: p147 qu 6

Using Angle rules

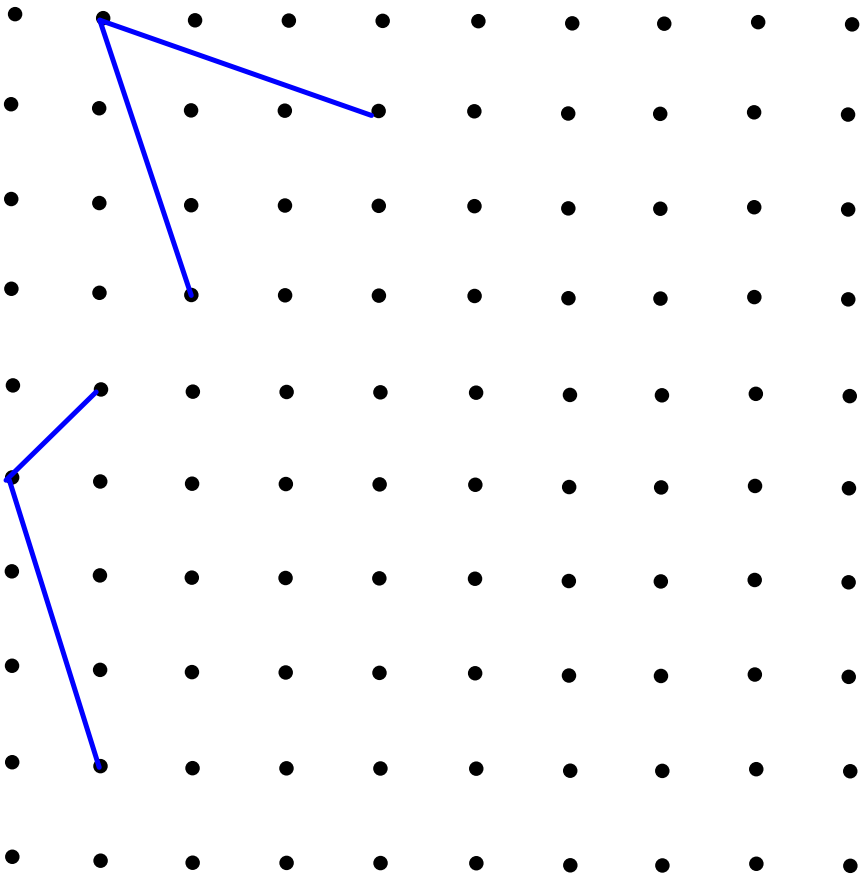


2. Show how you found angle x, angle y and angle z.




a rectangle
a rhombus

a rhombus



a kite

Attachments

YR 7 SSM2.doc

angles.gsp

angles in polygons.ppt

Angle properties.gsp