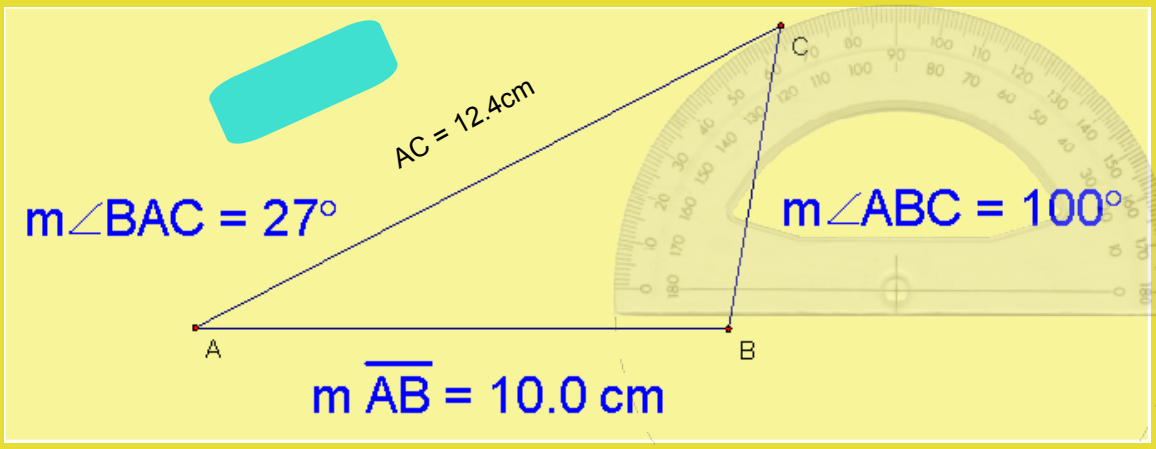
Today you will need a
protractor
pencil
compasses
ruler

Friday you will need
your brain
For a test on
inequalities
sim equations
constructions and loci (this weeks work)
cumulative freq and stem and leaf
last digit

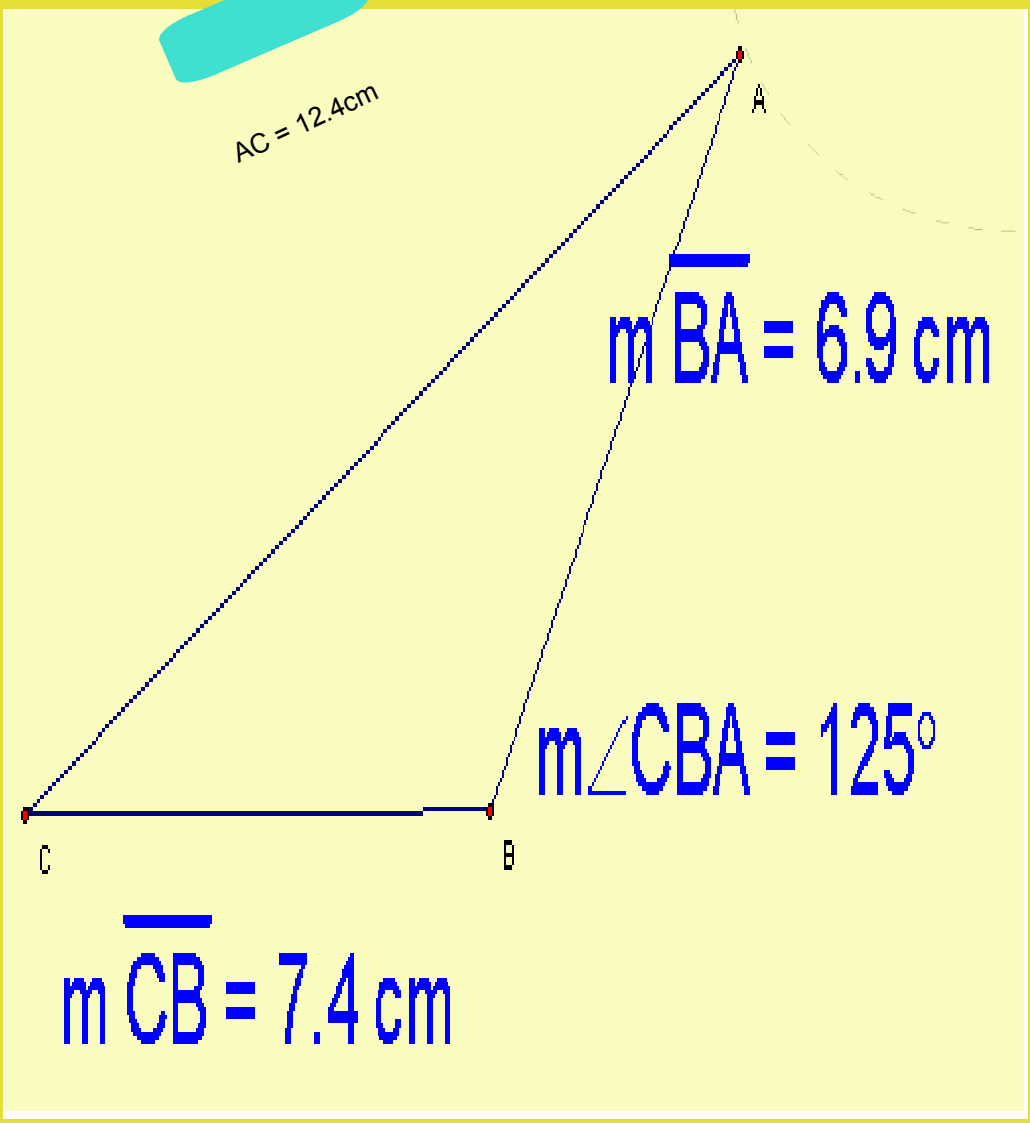
Constructing triangles

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

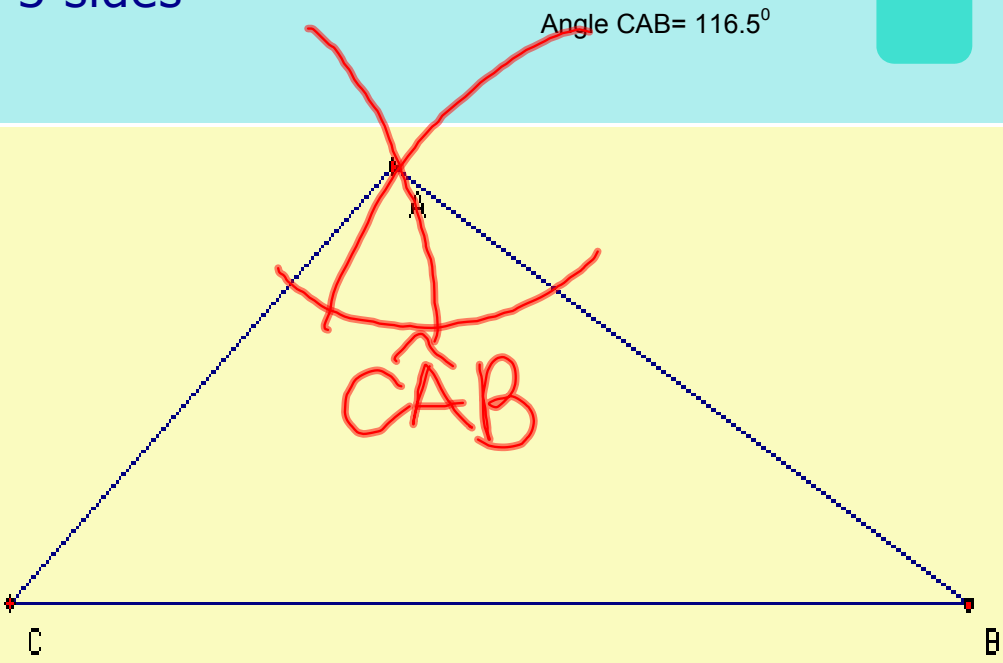
1. One side and 2 angles



2. 2 sides and an angle



3. 3 sides



$m\overline{CB} = 12.0\ cm$

$m\overline{CA} = 6.0\ cm$

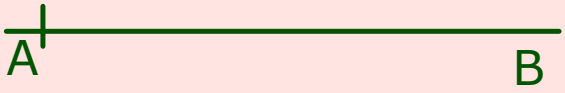
$m\overline{BA} = 8.0\ cm$

Constructing an equilateral triangle

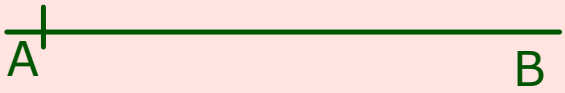
Draw a base line.

Set your compasses to 10cm.

Mark A on the left of your base line and B 10cm away.



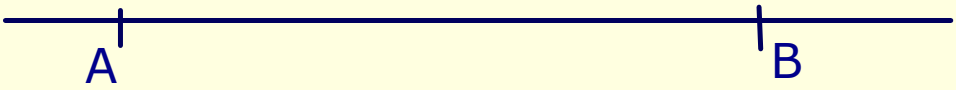
From A draw an arc and from B draw an arc.



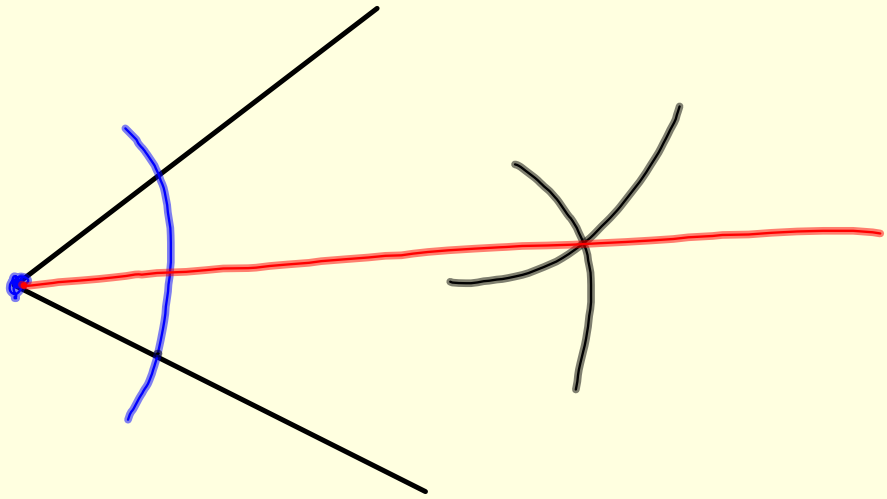
C is your 3rd point of the triangle!

Make an equilateral triangle with sides 8cm.

Constructing the perpendicular bisector of a line.



Bisecting an angle

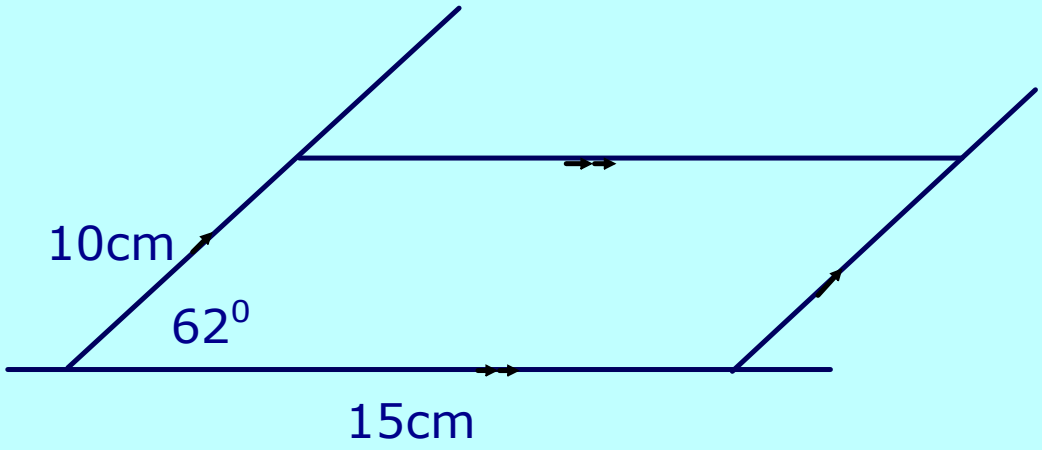


Construct a 45^0 angle.

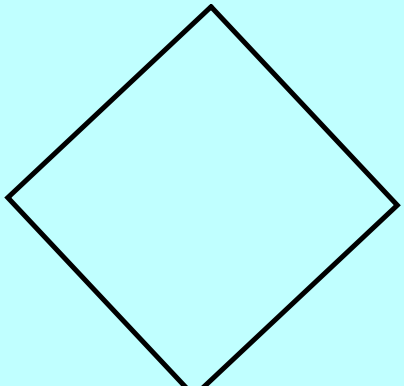
Construct a 30^0 angle.

Construct this parallelogram

(you will need a protractor)

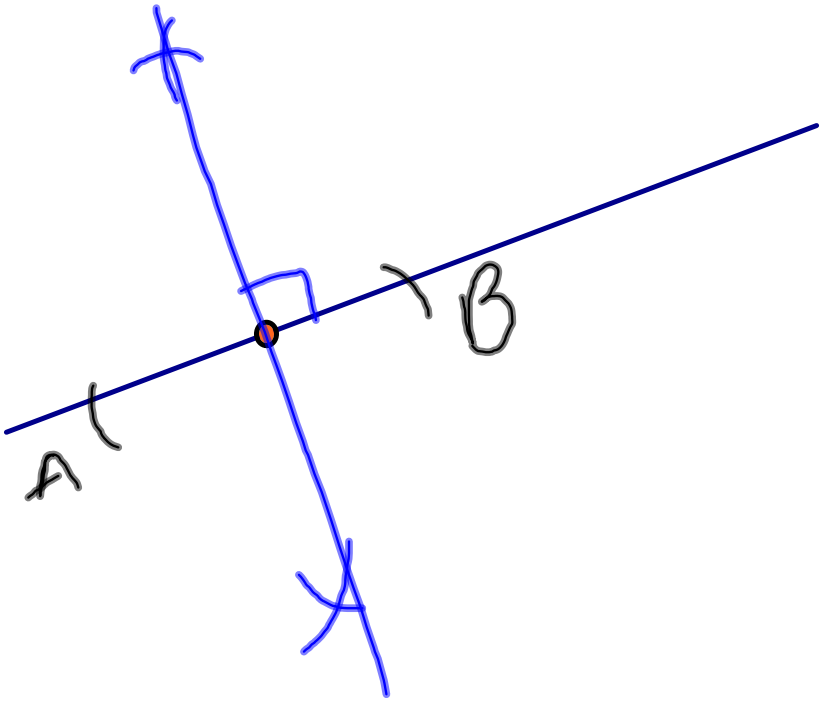


Construct a square with sides 8cm.

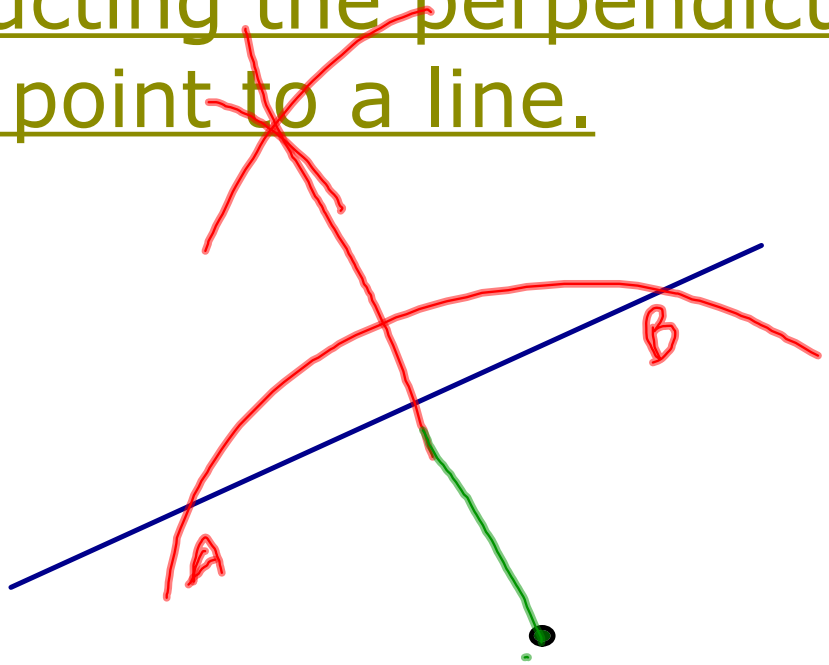


8cm

Constructing the perpendicular from a point on a line.



Constructing the perpendicular from a point to a line.



On a plain piece of paper construct:

- an equilateral triangle with sides 6cm
- a rectangle 6cm by 5cm
- a right angled, isosceles triangle
- an angle of 135^0
- an angle of 120^0

Make sure each construction has a title!

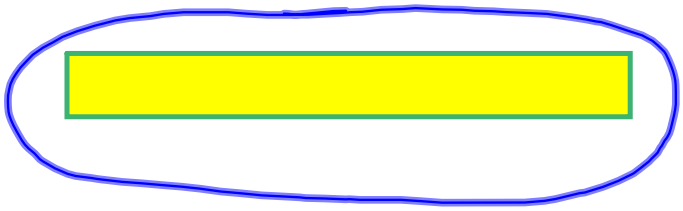
In your books:
page 144 A6 onwards

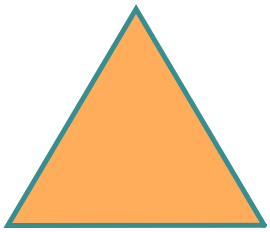
hands up if ..
you are sitting equal distance from x and y

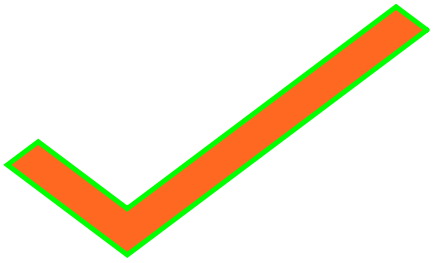
you are sitting equal distance from these 2 walls

everyone who is sitting approx 2 m from T

A ball rolls around this shape.
Sketch the locus of points made by a light in its centre.



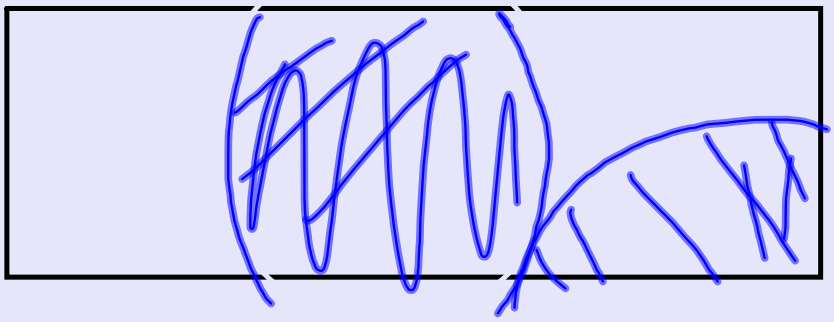


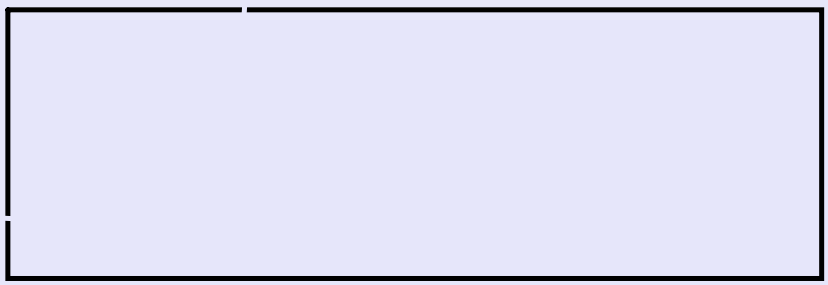


A goat wanders around its 15m x 8m field.
Sketch the area it can graze if...

a) it is tethered by a rope 5m long to a pole in the middle of the field.

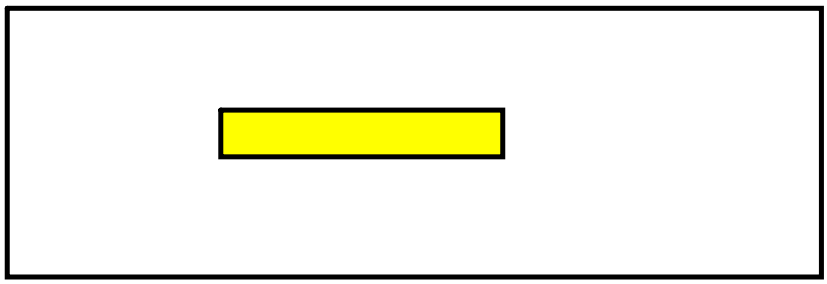
b) it is tethered by a rope 5m long to a pole at the corner of the field.





A goat wanders around its 12m x 10mfield.
Sketch the area it can graze if he is untethered but...

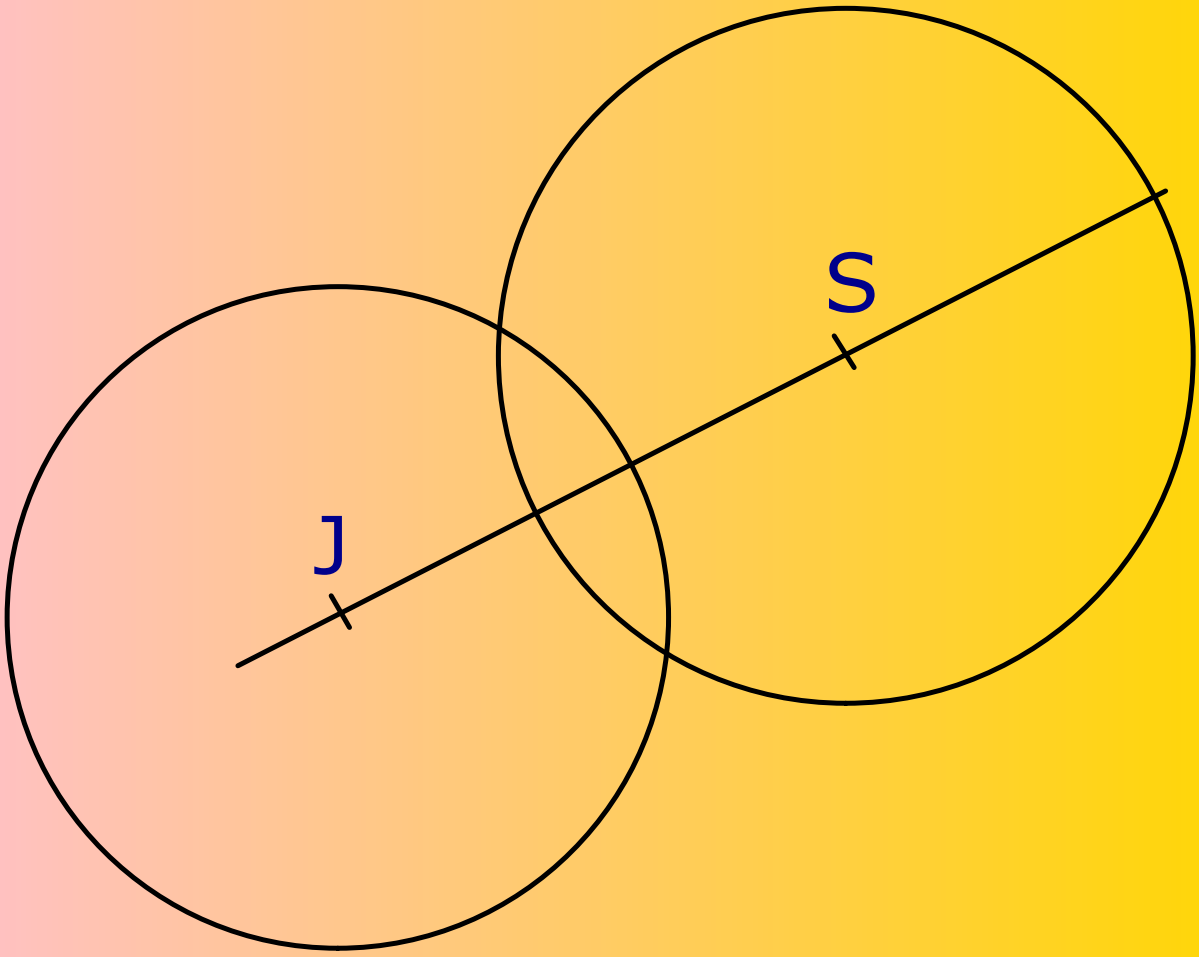
There is a fenced off bit in the middle due to broken glass. If he goes within a metre of it he will get a shock.
Where can he graze?



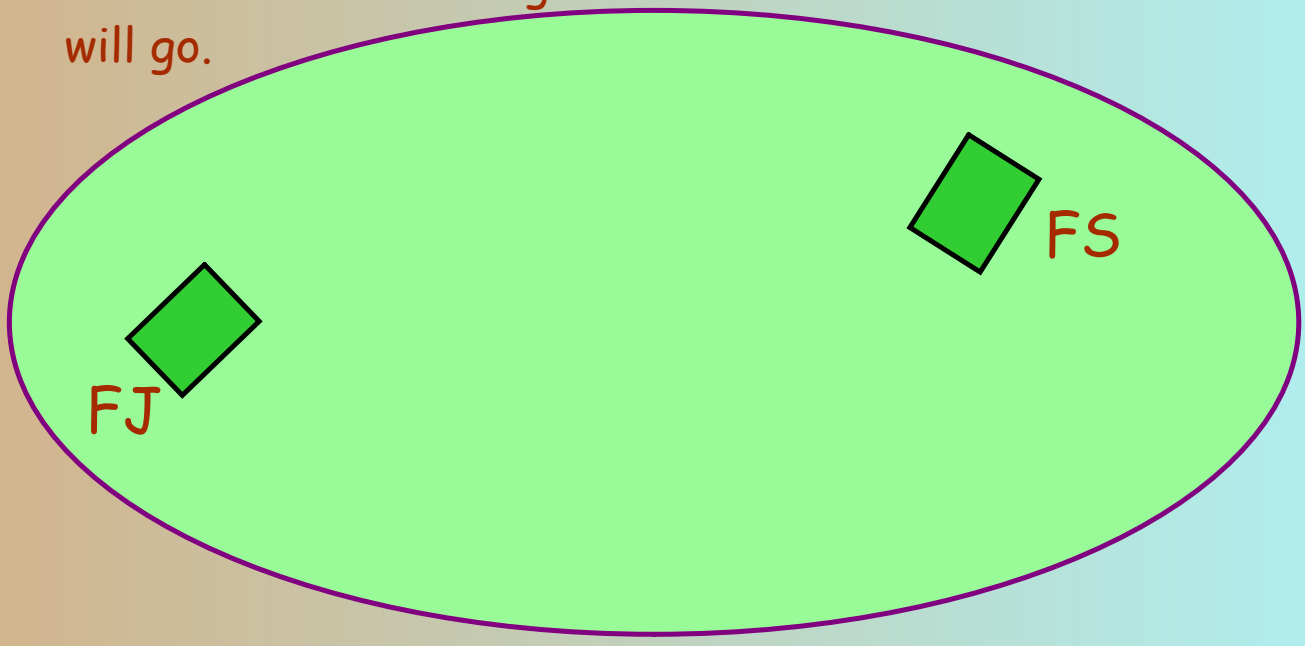
see mymaths

Loci

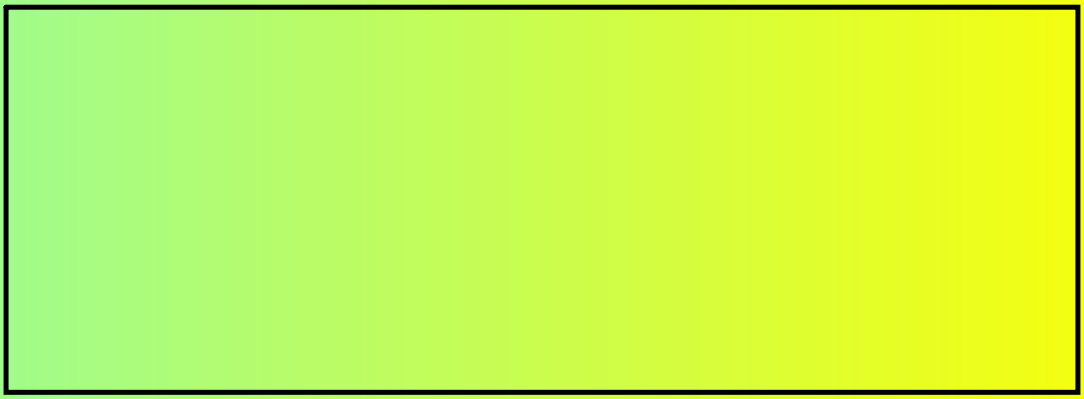
James and Steven are standing 15m apart. They are both swinging a ball on a rope. The ropes are 8m long. Draw an accurate diagram (with 1cm representing 1 m) to show the area in which the 2 balls could collide.



Farmer Smith and Farmer Jones live 2km apart. They haven't spoken to each other for 2 years because Farmer Smith's dog ate Farmer Jones' prize duck. They decide to put a line of tall poplar trees between their farm houses so they don't have to look at each other's land. The trees are located equidistant from both farms.
Draw an accurate diagram to show where the trees will go.



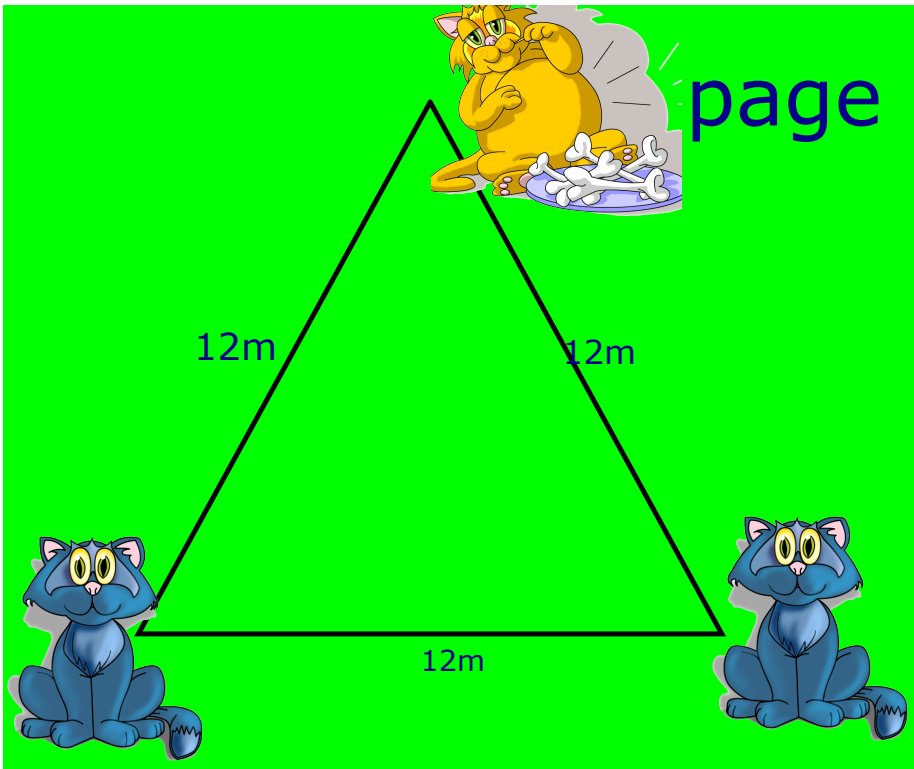
Hannah



Will

Segregation is back.
Girls must stand closer to Hannah than Will.
Boys must stand closer to Will than Hannah.
Shade the area in which the girls can stand.

page 146 B1-B6



3 cats wait patiently at the vertices of the triangle for a mouse to arrive.

They can each pounce 5m, except the fat one who can only pounce 4. Shade the safe area for the mouse.

C. Plans and elevations.ppt