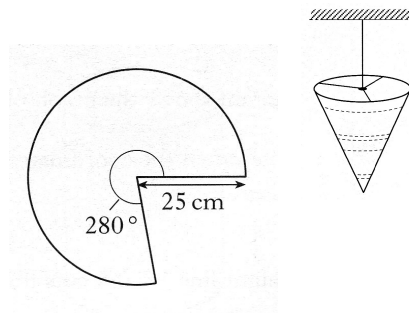


15. A lampshade is made in the shape of a cone, as shown.

The shape of the material used for the lampshade is a sector of a circle.

The circle has radius 25 centimetres and the angle of the sector is 280°

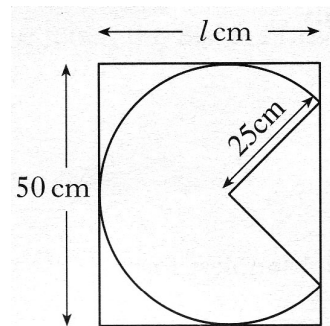


- a) Find the area of the sector of the circle.

3 KU

Each sector is cut from a rectangular piece of material, 50 centimetres wide.

- b) Find to the nearest centimetre the minimum length l , required for the piece of material.

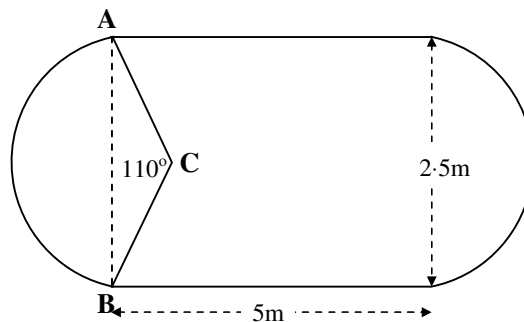


4 RE

16. A large shop display table is in the shape of a rectangle with a circle segment at both ends, as shown in the diagram below.

The rectangle at the centre measures 5 metres by 2.5 metres.

AC and BC are radii of the circle and angle ACB is 110° .



- (a) Show that AC, the radius of the segment, is 1.53 m correct to 3 significant figures.
- (b) To stand comfortably around this table it is estimated that an average person requires 75 cm of table edge.

3 RE

How many people can stand comfortably at the table described above?

4 RE

8. Trigonometry 1 – SOH-CAH-TOA

NB There is some overlap between these questions and those on Pythagoras and the Circle.

1. In the diagram

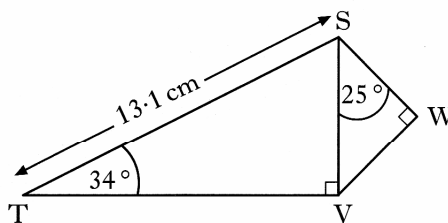
Angle $STV = 34^\circ$

Angle $VSW = 25^\circ$

Angle $SVT = \text{Angle } SWV = 90^\circ$

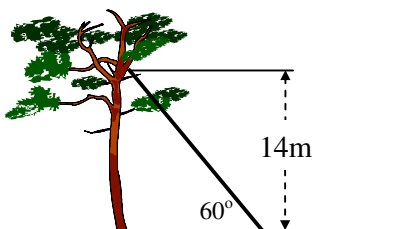
$ST = 13.1$ centimetres

Calculate the length of SW



4 KU

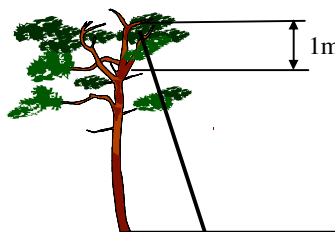
2. A cat is trapped in a tree and a ladder is placed against the tree in an attempt to rescue it.



The ladder rests against the tree making an angle of 60° with the horizontal and reaching 14 metres up the tree, allowing the rescuer to reach the cat.

Just as the cat is about to be rescued, it jumps to a branch 1 metre above its original resting place.

Calculate the size of the angle, to the nearest degree, that the ladder now has to make with the horizontal to allow the rescuer to reach the cat.



5 RE

3. The owners of Stately Hall Manor erected an entrance ramp

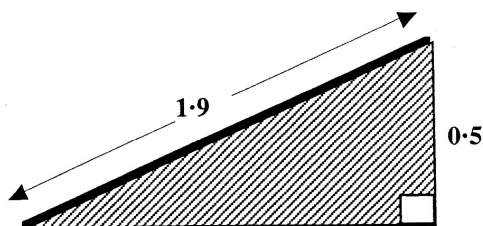
for disabled people at the main front entrance.

Local building regulations state that ramps must be built at an angle of **not more than** 15° to the horizontal ground.

A side view of the ramp which was actually erected is shown above.

Does this ramp satisfy the local building regulations ?

You must explain your answer with mathematical reasoning.

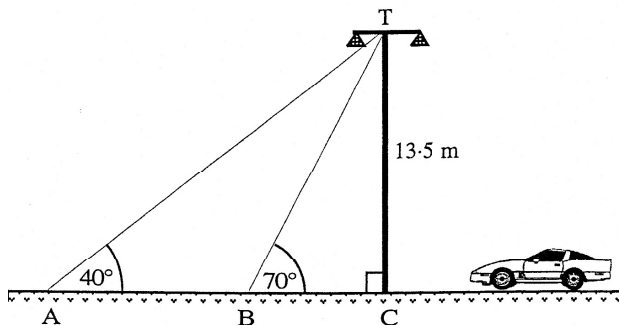


4 RE

4. Two support cables, from the top (T) of a motorway light, are attached to a pair of points, A and B, on the ground, as shown in the diagram.

a) Calculate the distance from B to C.

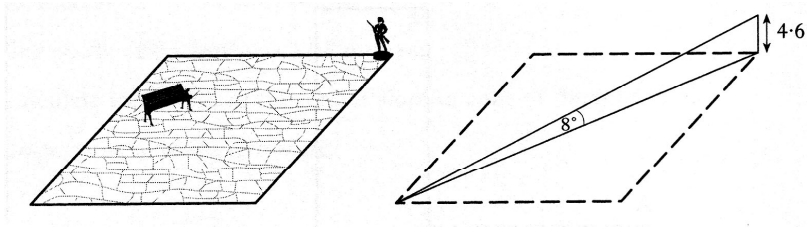
b) Calculate the distance from A to B.



2 KU

3 RE

5. A statue stands at the corner of a square courtyard.



The statue is 4.6 metres high.

The angle of elevation from the opposite corner of the courtyard to the top of the statue is 8° .

- a) Find the distance from the base of the statue to the opposite corner of the courtyard. 2 RE
- b) Show that the length of the side of the courtyard is approximately 23 metres. 2 RE

6. The diagram shows the design of an earring.

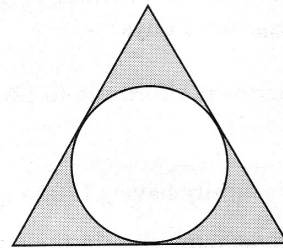
The earring consists of a circle inside an equilateral triangle.

The sides of the triangle are tangents to the circle.

The radius of the circle is 8 mm

The distance from the centre of the circle to **each** vertex of the triangle is 17mm.

Calculate the perimeter of the triangle.



4 RE

7. The Scott family want to build a conservatory as shown in the diagram.

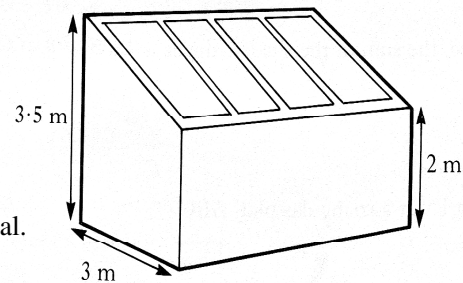
The conservatory is to be 3 metres wide.

The height of the conservatory at the lower end is to be 2 metres and at the higher end 3.5 metres.

To obtain planning permission, the roof must slope at an angle of (25 ± 2) degrees to the horizontal.

Should planning permission be granted.

Justify your answer.



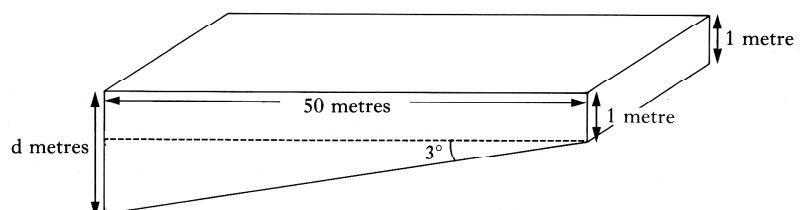
4 RE

8. The diagram shows the design of a swimming pool 50 metres in length.

The pool is 1 metre deep at one end and its base slopes downwards at an angle of 3° to the horizontal.

Calculate the depth, d metres, of the other end of the pool, giving your answer to 2 significant figures.

Do not use a scale drawing.



5 KU

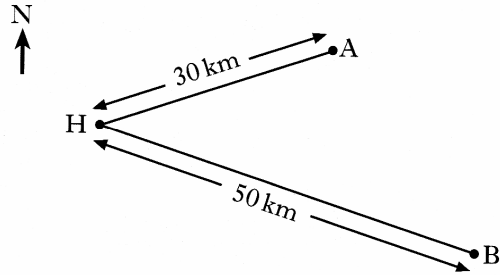
9. Trigonometry 2 – Sine, Cosine Rule, Area of Triangle

1. Two yachts leave from harbour H.
Yacht A sails on a bearing of 072°
for 30 kilometres and stops.

Yacht B sails on a bearing of 140°
for 50 kilometres and stops.

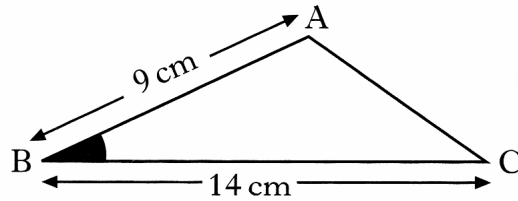
How far apart are the two yachts
when they have both stopped?

Do not use a scale drawing.



4 RE

2. The area of triangle is 38 square centimeters.
AB is 9 centimetres and BC is 14 centimetres.



Calculate the size of the acute angle ABC

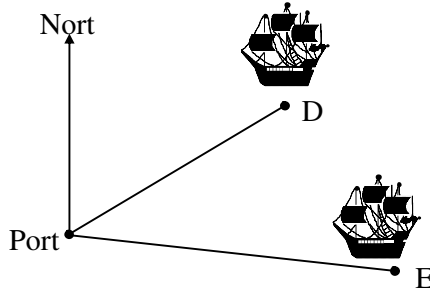
3 RE

3. Two boats leave port together.

Boat D sails on a course of 057°
at 13 miles per hour.

Boat E sails on a bearing of 104°
at 15 miles per hour.

After 45 minutes Boat D receives
a distress call from Boat E requesting
their help as soon as possible.

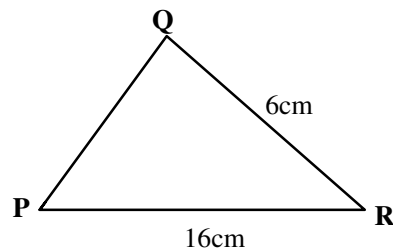


How far, to the nearest mile, would Boat D have to travel to reach Boat E?

4 RE

4. The area of the triangle shown is 36 cm^2 .

Show that $\sin R = \frac{3}{4}$.

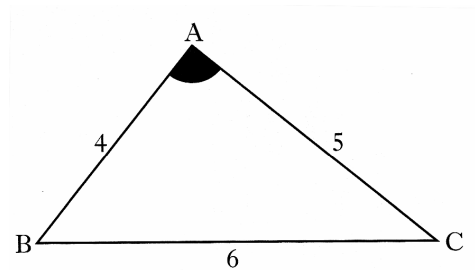


4 RE

5. In triangle ABC

AB = 4 units
AC = 5 units
BC = 6 units

Show that $\cos A = \frac{1}{8}$



3 KU

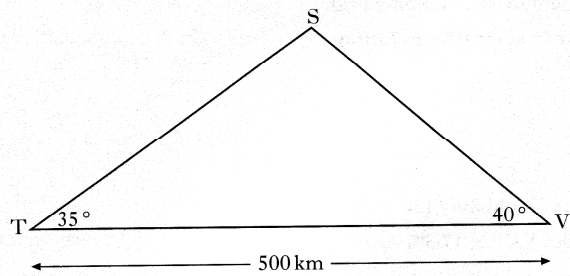
6. A TV signal is sent from a transmitter T, via a satellite S, to a village V, as shown in the diagram.

The village is 500 kilometres from the transmitter.

The signal is sent out at an angle of 35° and is received in the village at an angle of 40° .

Calculate the height of the satellite above the ground.

5 RE

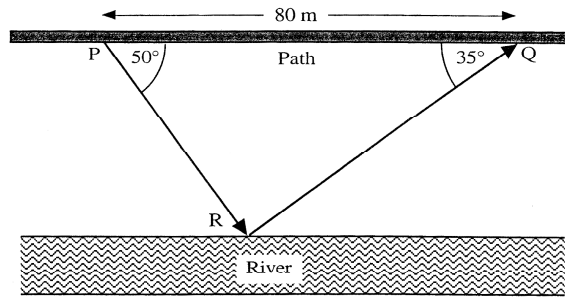


7. The path in the diagram opposite runs parallel to the river.

Jennifer leaves the path at P, walks to the river to bathe her feet at R and rejoins the path further on at Q.

Calculate the distance between the river and the path.

5 RE



8. The radio masts, Kangaroo (K), Wallaby (W) and Possum (P) are situated in the Australian outback.

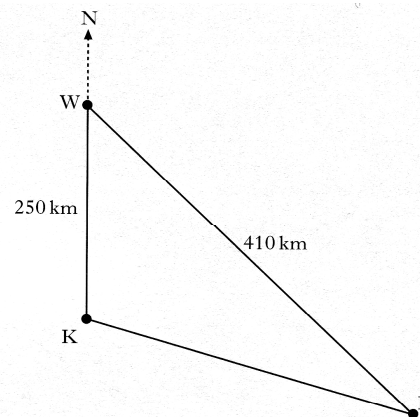
Kangaroo is 250 kilometres due south of Wallaby.

Wallaby is 410 kilometres from Possum

Possum is on a bearing of 130° from Kangaroo.

Calculate the bearing of Possum from Wallaby.

Do not use a scale drawing.



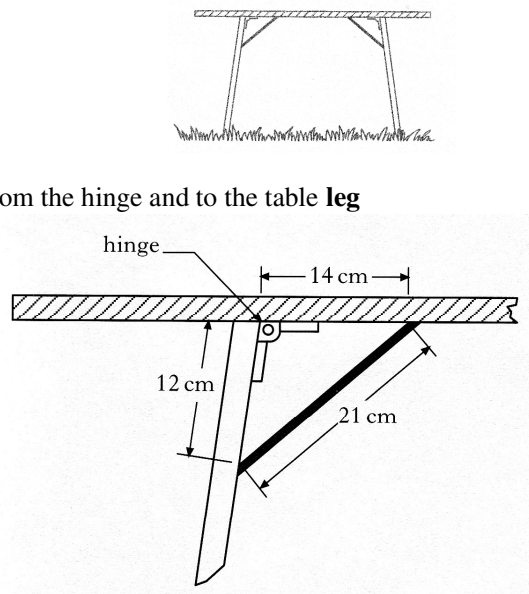
4 RE

9. Each leg of a folding table is prevented from opening too far by a metal bar.

The metal bar is 21 centimetres long.

It is fixed to the table **top** 14 centimetres from the hinge and to the table **leg** 12 centimetres from the hinge.

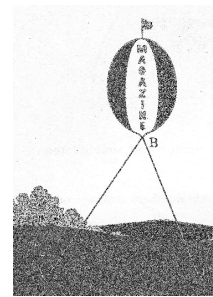
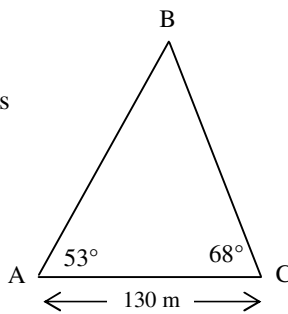
- a) Calculate the size of the obtuse angle which the table top makes with the leg.
- b) Given that the table leg is 70 centimetres long, calculate the height of the table.



3 KU

3 RE

10. A newspaper group advertises a new magazine on a helium balloon.
- From the base of the balloon, B, two holding wires are attached to the ground at A and C.
- The distance from A to C is 130 metres.
- From A, the angle of elevation of B is 53° .
- From C, the angle of elevation of B is 68° .
- Calculate the height of point B above the ground.



Do not use a scale drawing

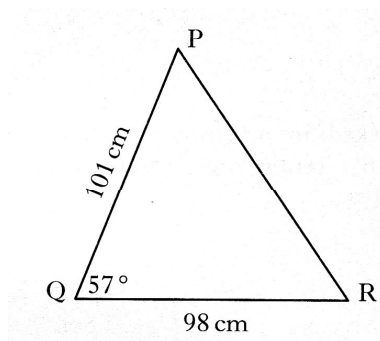
5 RE

11. The bonnet of a car is held open, at an angle of 57° , by a metal rod.
- In the diagram,
- PQ represents the bonnet
- PR represents the metal rod.
- QR represents the distance from the base of the bonnet to the front of the car.

PQ is 101 centimetres

QR is 98 centimetres

Calculate the length of the metal rod, PR.



Do not use a scale drawing.

4 KU

12. Triangle ABC has an area of 14 square centimetres.
- AB is 6 centimetres and AC is 7 centimetres.
- Calculate the possible **sizes** of angle BAC

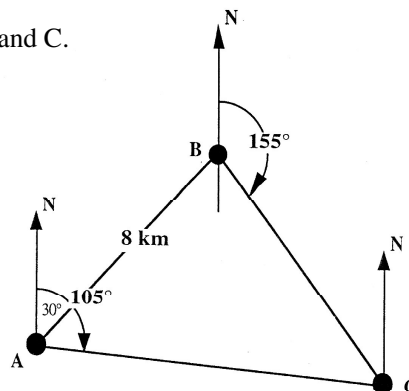
4 RE

13. An orienteering course has 3 checkpoints – A, B and C.
- B is on a bearing of 030° and a distance of 8 km from A.
- C is on a bearing of 155° from B and a bearing of 105° from A.

a) Explain clearly why $\angle ABC = 55^\circ$

b) Calculate the distance between points B and C.

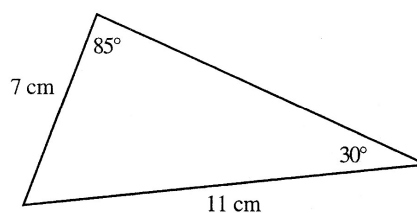
Do not use a scale drawing.



2 KU

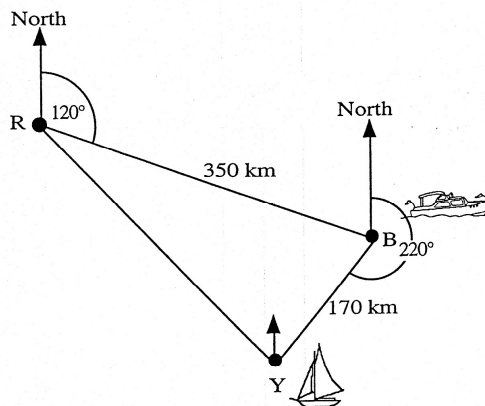
4 RE

14. Calculate the area of the triangle.



3 RE

15. A rescue boat, at R, picks up a distress call from a boat B, 350 km away, on a bearing of 120° .
At the same time another distress call comes from a yacht Y, which is 170 km away from B and on a bearing of 220° from B.



- a) Prove that $\angle RBY = 80^\circ$
b) The rescue boat is obliged to respond to the nearest distress call first.

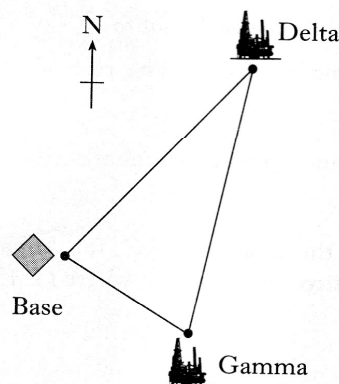
Will the people on the boat or those on the yacht be rescued first?

(You must support your answer by showing working).

2 KU

4 RE

16. The diagram shows the position of a helicopter base and two oil rigs, Delta and Gamma.
From the helicopter base, the oil rig Delta is 35 kilometres away on a bearing of 050° .
From the same base, the oil rig Gamma is 20 kilometres away on a bearing of 125° .

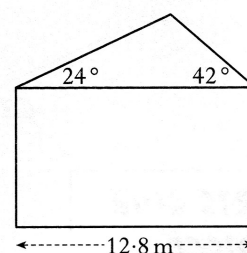


Calculate the distance between Delta and Gamma.

Do not use a scale drawing.

5 RE

17. The end wall of a bungalow is in the shape of a rectangle and a triangle as shown in the diagram.
The roof has one edge inclined at an angle of 24° to the horizontal and the other edge inclined at 42° to the horizontal.



The width of the house is 12.8 metres.

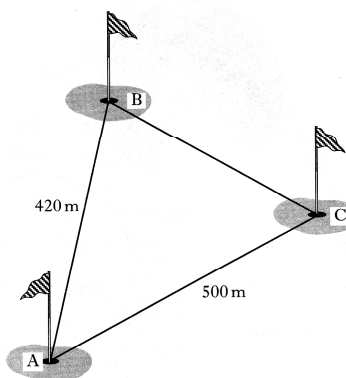
Calculate the length of the longer sloping edge of the roof.

Do not use a scale drawing.

4 KU

18. The diagram shows part of a golf course.

The distance AB is 420 metres, the distance AC is 500 metres and angle $BAC = 52^\circ$.



Calculate the distance BC.

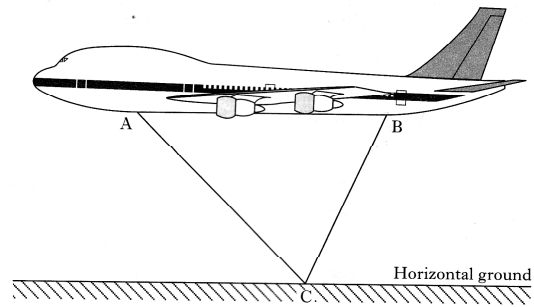
Do not use a scale drawing.

3 KU

19. An aeroplane is flying parallel to the ground.

Lights have been fitted at A and B as shown in the diagram.

When the aeroplane is flying at a certain height, the beams from these lights meet exactly on the ground at C.



The angle of depression of the beam of light from A to C is 50° .

The angle of depression of the beam of light from B to C is 70° .

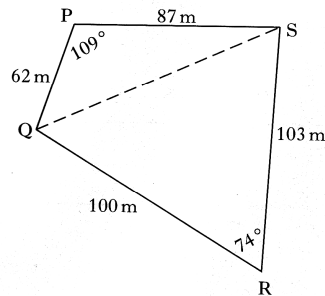
The distance AB is 20 metres.

Find the height of the aeroplane above C.

6 RE

20. The sketch shows a plot of ground, PQRS, split into two triangles.

Calculate the area of the plot of ground.



4 KU

21. The diagram shows the position of three airports, A, E and G.

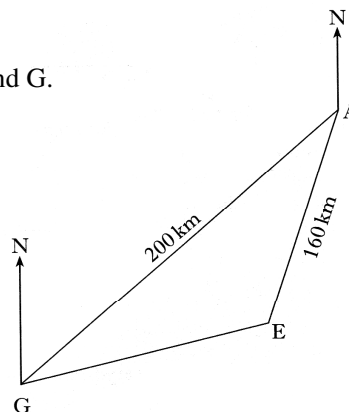
G is 200 kilometres from A

E is 160 kilometres from A

From G the bearing of A is 052°

From A the bearing of E is 216°

How far apart are airports G and E ?



6 RE

22. The side wall of a house, with measurements as shown in the diagram, requires painting.

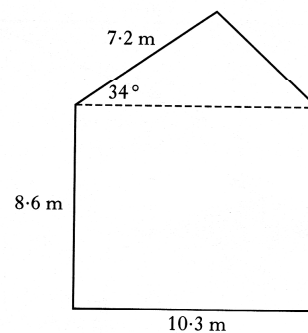
The wall is in the shape of a rectangle and a triangle.

On average, a litre of paint will cover 8 square metres.

A painter estimates that he will require 12 litres of paint.

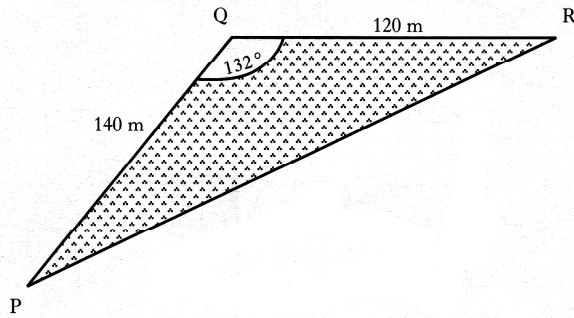
Will this be enough paint?

Justify your answer.



4 RE

23. A triangular field, PQR is shown in the diagram.
 PQ = 140 metres,
 QR = 120 metres
 and angle PQR = 132°

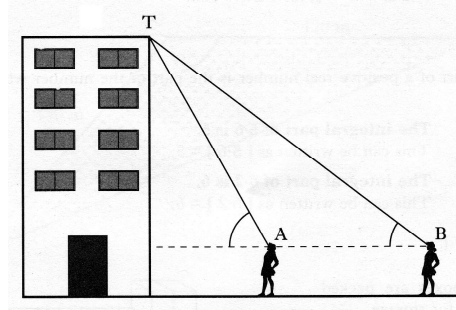


Calculate the length of PR.

Do not use a scale drawing.

4 KU

24. The diagram shows two positions of a student as she views the top of a tower.
 From position B, the angle of elevation to T at the top of the tower is 64° .
 From position A, the angle of elevation to T at the top of the tower is 69° .

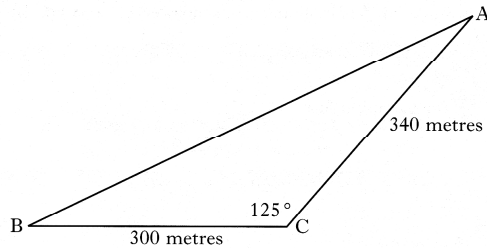


The distance AB is 4.8 metres
 and the height of the student to eye level is 1.5 metres.

Find the height of the tower.

6 RE

25. A field, ABC, is shown in the diagram.



Find the area of the field.

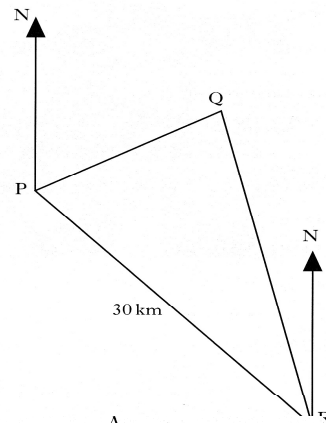
2 KU

26. A ship, at position P, observes a lighthouse at position Q on a bearing of 040° .

The ship travels 30 kilometres on a bearing of 125° to position R.

From position R, the ship observes the lighthouse on a bearing of 340° .

When the ship is at position R, how far is it from the lighthouse?



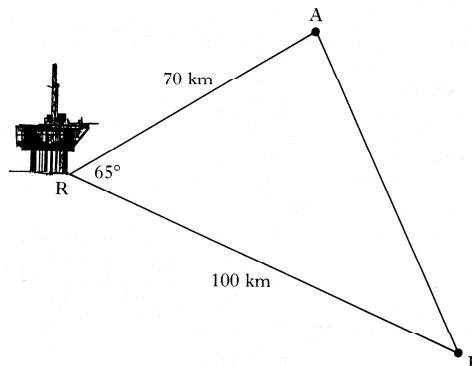
6 RE

27. The diagram shows the positions of an oilrig and two ships.

The oilrig at R is 70 kilometres from a ship at A and 100 kilometres from a ship at B. Angle ARB = 65° .

Calculate the distance AB.

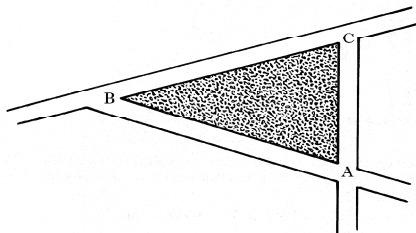
Do not use a scale drawing.



4 KU

28. A traffic island, ABC, is shown in the diagram.

Find the area of the traffic island if $AB = 12.6$ metres, $AC = 10$ metres and angle $BAC = 72^\circ$



2 KU

29. The diagram shows the goalposts on a rugby field.

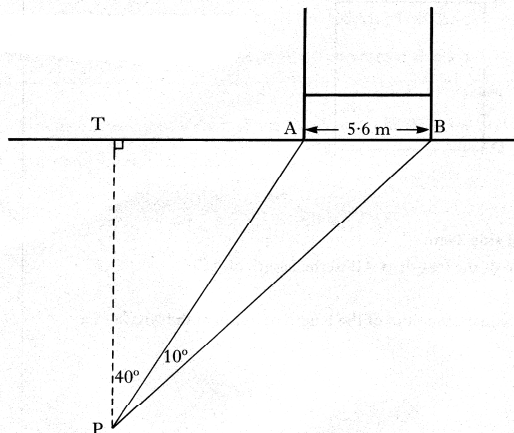
To take a kick at goal, a player moves from T to position P.

TP is perpendicular to TB.

Angle $TPA = 40^\circ$ and angle $APB = 10^\circ$

The distance AB between the goal posts is 5.6 metres.

Find the distance from T to P.

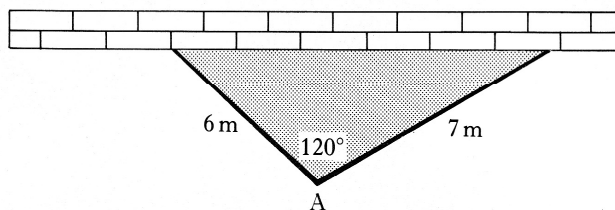


6 RE

30. A family wants to fence off a triangular part of their garden for their pet rabbits.

They have a long straight wall available and two straight pieces of fencing 6 metres and 7 metres in length.

They first erect the fencing as shown in the diagram.



a) Find the area of garden enclosed by the wall and the two pieces of fencing.

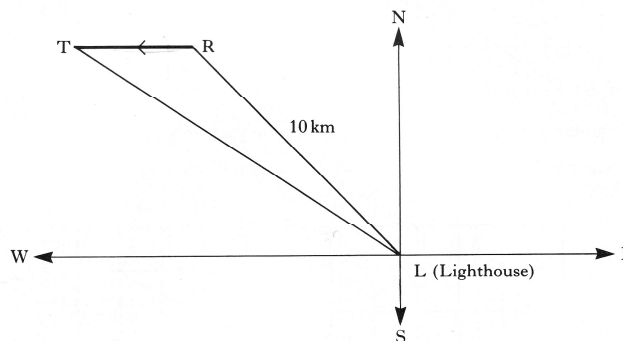
2 KU

b) What size should they make the angle at A so that the greatest area of garden is enclosed?

Give a reason for your answer.

2 KU

31. A ship is first spotted at position R, which is on a bearing of 315° from a lighthouse, L. The distance between R and L is 10 kilometres. After the ship has travelled due West to position T, its bearing from the lighthouse is 300° .



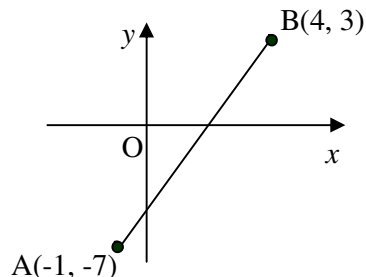
How far has the ship travelled from R to T ?

5 RE

10. Gradients & The Straight Line

Finding Equations

1. In the diagram, A is the point $(-1, -7)$ and B is the point $(4, 3)$.
- Find the gradient of the line AB.
 - AB cuts the y-axis at the point $(0, -5)$. Write down the equation of the line AB
 - The point $(3k, k)$ lies on AB. Find the value of k .



1 KU

1 KU

2 RE

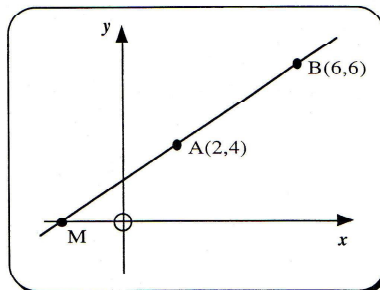
2. A is the point (a^2, a)
 T is the point (t^2, t) $a \neq t$
 Find the gradient of the line AT
 Give your answer in its simplest form.

3 KU

3. The straight line through the points $A(2, 4)$ and $B(6, 6)$ is shown in the diagram.

The point M is where the line AB cuts the x-axis.

- Find the equation of the straight line AB.
- Use this equation to find the coordinates of the point M.



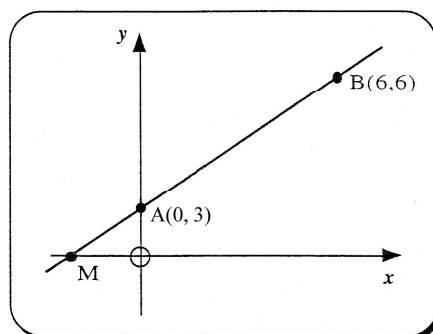
4 KU

2 RE

4. The straight line through the points $A(0, 3)$ and $B(6, 6)$ is shown in the diagram.

The point M is where the line AB cuts the x-axis.

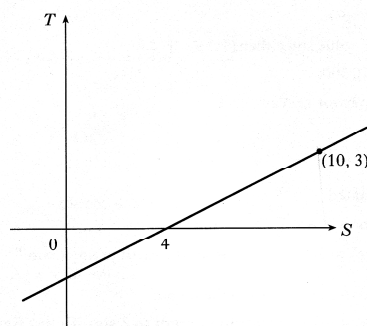
- Find the equation of the straight line AB.
- Use this equation to find the coordinates of the point M.



4 KU

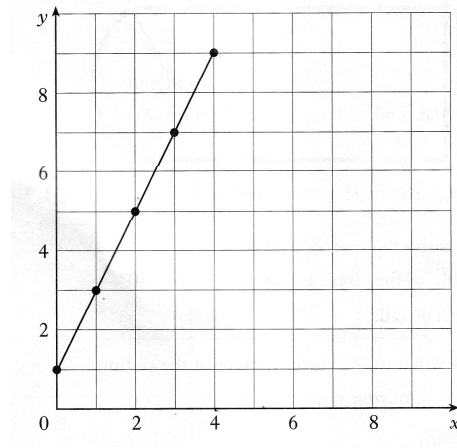
2 RE

5. Find the equation of the given straight line in terms of S and T.



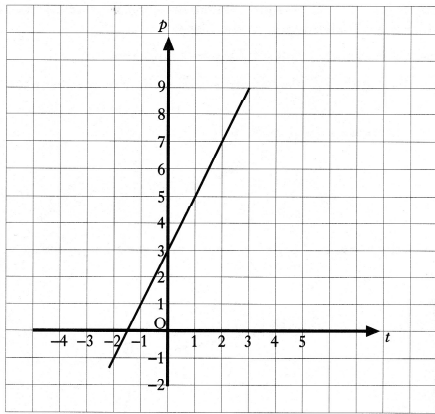
4 KU

6. Find the equation of the straight line.



3 KU

7.

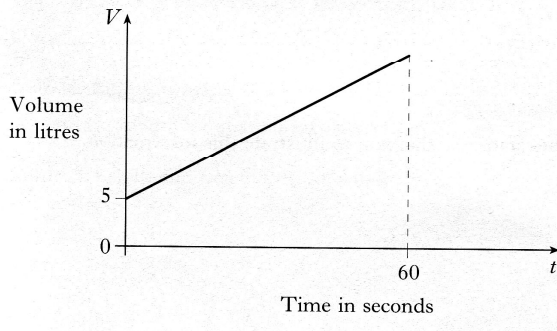


Find the equation of the straight line in terms of p and t .

4 KU

8. The tank of a car contains 5 litres of petrol.

The graph below shows how the volume of petrol in this tank changes as a further 45 litres of petrol is pumped in at a steady rate for 60 seconds.

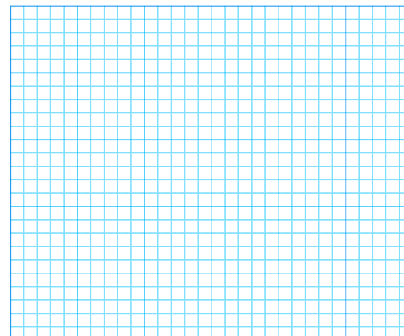


Find the equation of the straight line in terms of V and t .

4 KU

9. A tank contains 10 litres of water.
A further 30 litres of water is poured into the tank at a steady rate of 5 litres per minute.

a) On the 2mm square ruled graph paper provided, draw a graph of the volume, V litres, of water in the tank against the time, t minutes.



4 KU

b) Write down an equation connecting V and t .

2 KU

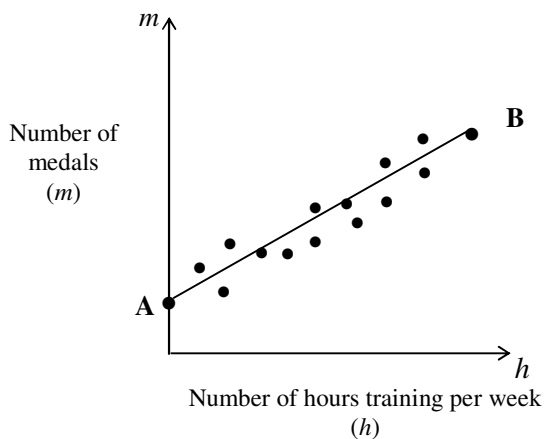
Applications of the Equation of a Straight Line

1. The graph shows the relationship between the number of hours (h) an athlete trains per week and the number of Championship medals (m) they have won.

A best fitting straight line AB has been drawn.

Athlete A does not train but has won 4 medals this year.

Athlete B who trains for 12 hours per week has won 40 medals this year.



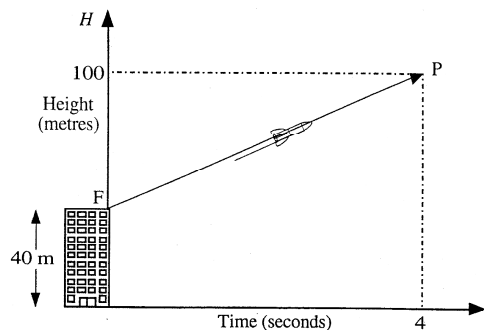
- (a) Find the equation of the straight line AB in terms of m and h . 4 RE
- (b) How many medals would you expect an athlete who trains 8 hours per week to have won? 1 KU

2. A boy sets off a rocket from the top of a 40 metre high block of flats.

The diagram shows the path of the rocket over the first 4 seconds.

It is represented by the straight line in the graph.

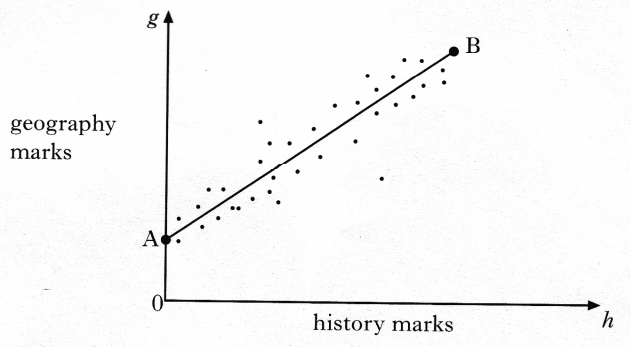
After 4 seconds, the rocket has reached a point 100 metres above the ground.



Find the equation of the straight line FP in terms of H and t .

4 RE

3. The graph below shows the relationship between the history and geography marks of a class of students



A best fitting straight line, AB has been drawn.

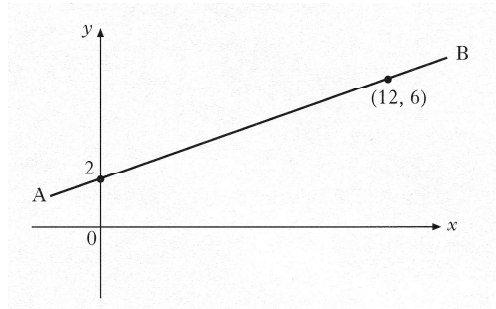
Point A represents 0 marks for history and 12 marks for geography.

Point B represents 90 marks for history and 82 marks for geography.

Find the equation of the straight line AB in terms of h and g .

4 RE

4. A water pipe runs between two buildings. These are represented by the points A and B in the diagram below.



- a) Using the information in the diagram, show that the equation of the line AB is $3y - x = 6$.
- b) An emergency outlet pipe has to be built across the main pipe. The line representing this outlet pipe has equation $4y + 5x = 46$

3 KU

Calculate the coordinates of the point on the diagram at which the outlet pipe will cut across the main water pipe.

4 RE

5. When a patient's blood pressure (B.P.), is taken, two measurements are made.

For example, in "160 over 70" (or $\frac{160}{70}$),

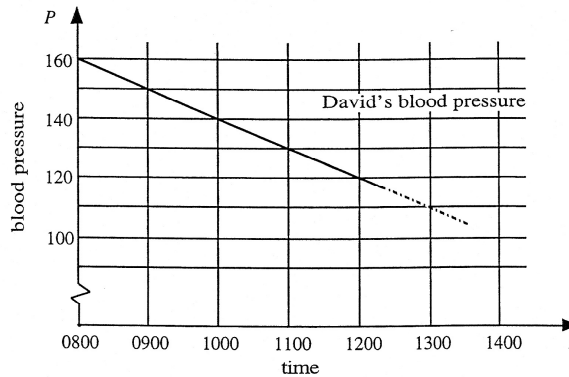
⇒ the 160 is the reading when the heart is pumping.

⇒ the 70 is the reading when the heart is at rest.



David has a heart problem, and has his blood pressure taken every hour.

The first number of these two measurements is monitored very carefully and the nurse plots a graph, showing the changes from 8 am.



- a) Find the gradient of the line shown above.
- b) Write down the equation of the line in the form $P = \dots\dots\dots$
- c) It is known that if the blood pressure drops below 70, the patient will be in danger of losing consciousness.

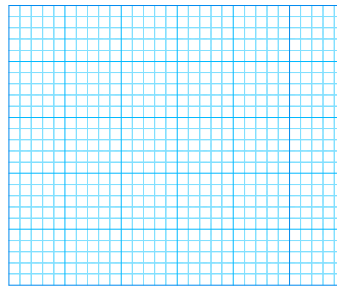
2 KU

2 KU

If David's blood pressure continues to drop in the way indicated, when might he be expected to become unconscious.

3 RE

6. A tank contains 240 litres of water.
When the tap is opened, water flows from the tank at a steady rate of 20 litres per minute.



- a) On the 2mm square-ruled paper provided, draw a graph of the volume V litres, of water in the tank against the time, t minutes.
- b) Write down an equation connecting V and t .

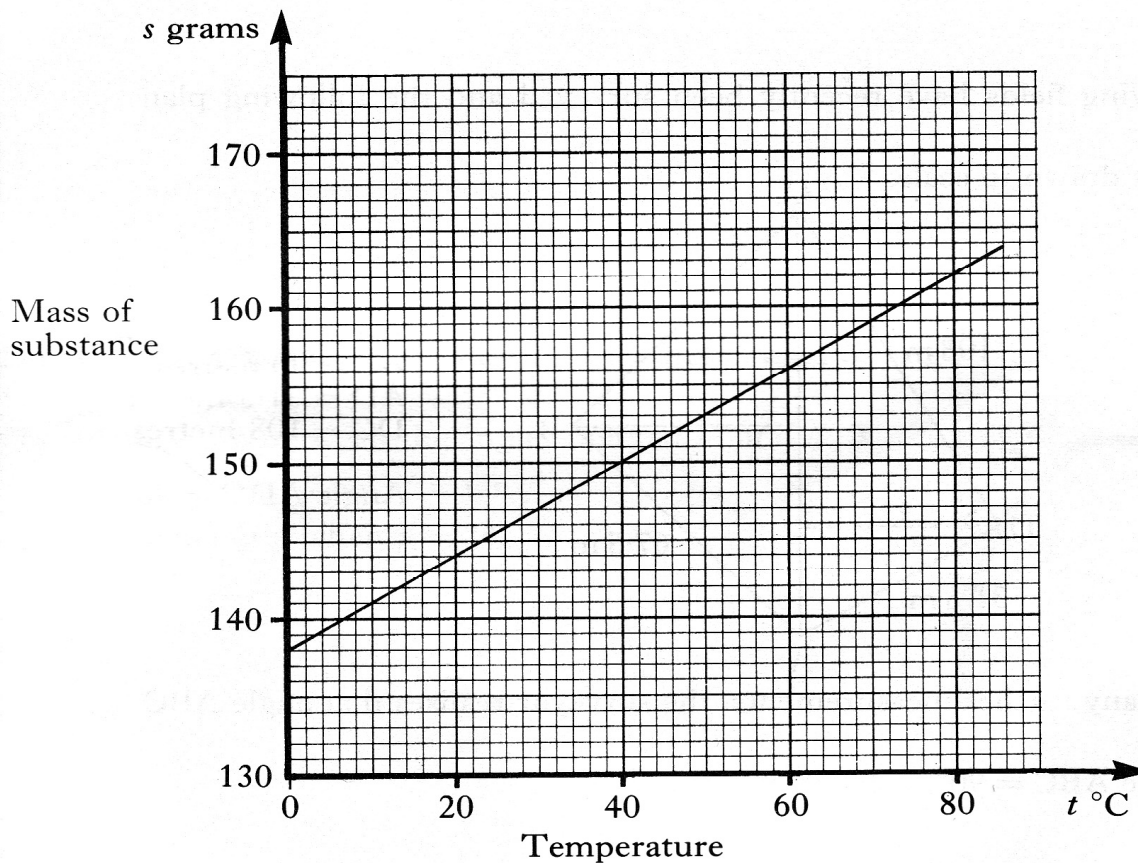
3 KU

2 KU

7. The graph below shows the number of grams, s , of a substance that can be dissolved in a fixed quantity of water when the temperature of the water is $t^\circ\text{C}$.

Find the equation of this straight line in terms of s and t .

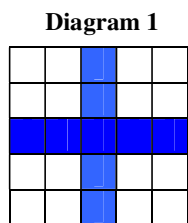
4 KU



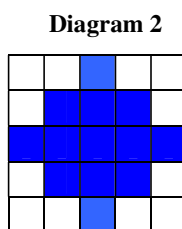
11. Simultaneous Equations

1. Andrew and Doreen each book in at the Sleepwell Lodge.
- a) Andrew stays for 3 nights and has breakfast on 2 mornings.
His bill is £145
Write down an algebraic equation to illustrate this. 1 KU
- b) Doreen stays for 5 nights and has breakfast on 3 mornings.
Her bill is £240.
Write down an equation to illustrate this. 1 KU
- c) Find the cost of one breakfast. 3 RE

2. The reception area in a council office block is to be tiled with a mixture of two types of ceramic tile – white and blue.
- The contractors left two samples, with their cost per square metre, as shown in the diagrams below.



Cost: £25.20

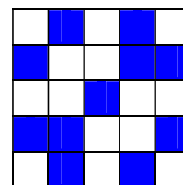


Cost: £26.40

- (a) Using Diagram 1 write down an equation in b and w , where b is the cost of a blue tile and w is the cost of a white tile. 1 KU
- (b) Using Diagram 2 write down a second equation in b and w . 1 KU

Unfortunately the manager did not like any of the samples left and decided to use one of his own.

His choice is shown in the diagram on the right.



- (c) How much per square metre would this design cost? 4 RE
3. a) 4 peaches and 3 grapefruit cost £1.30
Write down an algebraic equation to illustrate this. 1 KU
- b) 2 peaches and 4 grapefruit cost £1.20.
Write down an algebraic equation to illustrate this. 1 KU
- c) Find the cost of 3 peaches and 2 grapefruit. 4 RE

4. The tickets for a Sports Club Disco cost £2 for members and £3 for non-members.

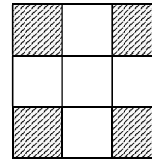
- a) The total ticket money collected was £580.
 x tickets were sold to members
and y tickets were sold to non-members.
Use this information to write down an equation involving x and y .
- b) 250 people bought tickets for the disco.
Write down another equation involving x and y .
- c) How many tickets were sold to members ?



2 RE
1 RE
3 RE

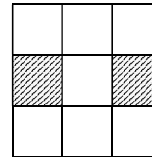
5. A small square patio required nine slabs to cover it.

- a) The cost of using 4 patterned slabs and 5 plain ones is £15.50
by letting $£x$ be the cost of 1 patterned slab.
 $£y$ be the cost of 1 plain slab.
Write down an algebraic equation to illustrate this.



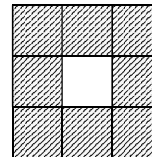
1
1 KU

- b) If 2 patterned slabs and 7 plain ones are used instead, the cost becomes £14.50.
Write down an algebraic equation to illustrate this.



1 KU

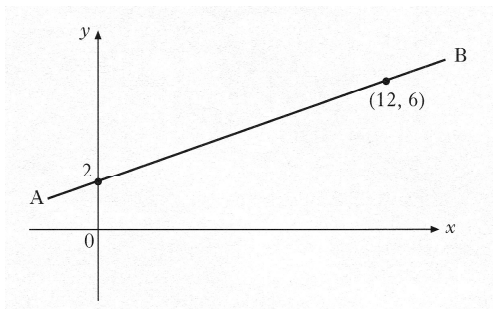
- c) Find the cost of this arrangement which is made up by using 8 patterned slabs and 1 plain one.



(show all your working clearly).

4 RE

6. A water pipe runs between two buildings. These are represented by the points A and B in the diagram below.

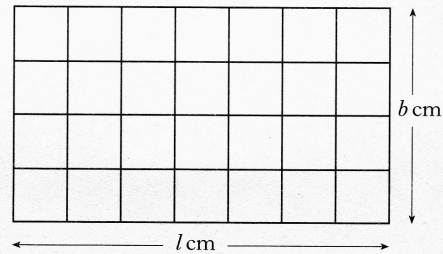


- a) Using the information in the diagram, show that the equation of the line AB is $3y - x = 6$.
- b) An emergency outlet pipe has to be built across the main pipe. The line representing this outlet pipe has equation $4y + 5x = 46$
Calculate the coordinates of the point on the diagram at which the outlet pipe will cut across the main water pipe.

3 KU

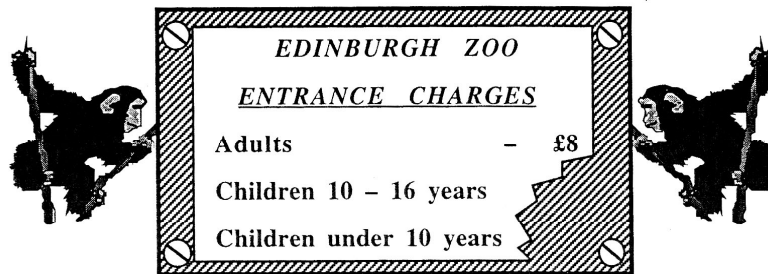
4 RE

7. A rectangular window has length, l centimetres and breadth b centimetres
 A security grid is made to fit this window.
 The grid has 5 horizontal wires and 8 vertical wires.



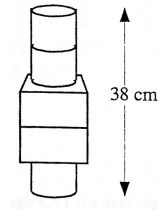
- a) The perimeter of the window is 260 centimetres.
- Use this information to write down an equation involving l and b . 1 RE
- b) In total, 770 centimetres of wire are used.
 Write down another equation involving l and b . 2 RE
- c) Find the length and breadth of the window. 3 RE
8. Gillian and Laura took their children to the zoo.

The entrance cost for the zoo was as shown below, but the charges for children have been torn off.

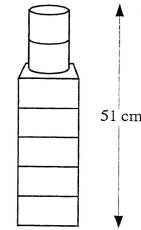


- a) **Gillian** paid for **herself** and:-
 her **2** sons aged 13 and 15, and her **3** daughters all under 10 years of age.
 Let the price for each 10 – 16 year old be £ x .
 Let the price for each under 10 year old be £ y .
 If Gillian paid £19 in total for herself and her own children, explain why the cost can be expressed in the form.
- $$2x + 3y = 11$$
- 1 RE
- b) **Laura** paid for **herself** and:-
 her **4** sons aged 10, 12, 13 and 16, and her **1** daughters aged 7.
 Laura paid £15 in total.
 Write down a second equation in x and y to indicate her total cost. 1 RE
- c) Calculate the cost of:
- (i) a single ticket for a 14 year old child. 3 RE
- (ii) a single ticket for a 7 year old child. 1 RE

9. A child has built a tower made of two types of brick.
It has three cylinders and two cuboids.
The total height of his tower is 38 centimetres.
Let x cm be the height of one cylinder and
let y be the height of one cuboid.

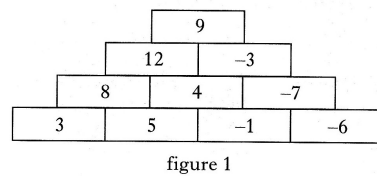


- a) Construct an equation connecting x and y
He then built this second tower using two cylinders and five cuboids, and its height was 51 centimetres.

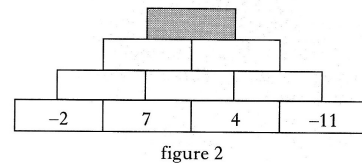


- b) Form a second equation in x and y and calculate the height of both a cylinder and a cuboid.

10. A number tower is built from bricks as shown in figure 1.
The number on the brick above is always equal to the sum of the two numbers below.

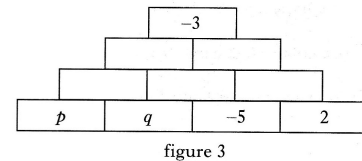


- a) Find the number on the shaded brick in figure 2.



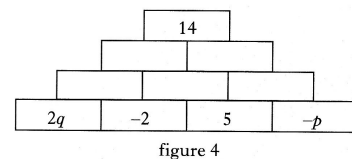
- b) In figure 3, two of the numbers on the base bricks are represented by p and q .

Show that $p + 3q = 10$



- c) Use figure 4 to write down a second equation in p and q .

- d) Find the values of p and q .



11. Alloys are made by mixing metals. Two different alloys are made using iron and lead.
To make the first alloy, 3 cubic centimetres of iron and 4 cubic centimetres of lead are used.
This alloy weighs 65 grams.

- a) Let x grams be the weight of 1 cubic centimetre of iron and y grams be the weight of 1 cubic centimetre of lead.


Write down an equation in x and y which satisfies the above condition.

To make the second alloy, 5 cubic centimetres of iron and 7 cubic centimetres of lead are used.
This alloy weighs 112 grams.

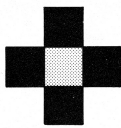
- b) Write down a second equation in x and y which satisfies this condition.
c) Find the weight of 1 cubic centimetre of iron and the weight of 1 cubic centimetre of lead.

12. A large floor is to be covered with black and grey square tiles to make a chequered pattern.
The person laying the tiles must start at the centre of the floor and work outwards.

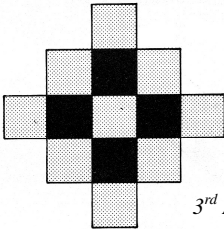
The instructions are as follows.



1st Arrangement



2nd Arrangement

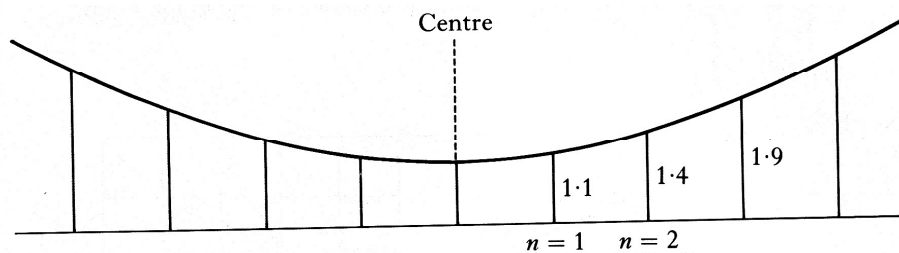


3rd Arrangement

1. Lay a grey tile in the centre of the floor
2. Place black tiles against the edges of the grey tiles
3. Place grey tiles against the edges of all the black tiles
4. Place black tiles against the edges of all the grey tiles.
5. And so on

- a) How many tiles are there in the 4th arrangement? 2 RE
- b) The number of tiles, T , needed to make the N th arrangement is given by the formula
- $$T = 2N^2 + aN + b$$
- Find the values of a and b . 4 RE

13. The heights in metres of the vertical rods of an early suspension bridge, as you move out from the centre, form the sequence
- 1.1, 1.4, 1.9, 2.6,



- a) What are the likely heights of the 5th and 6th rods in this sequence 2 RE
- b) The height, h metres, of the n th rod in the sequence is given by the formula
- $$h = A + bn^2$$
- Find the values of A and b and write down the formula. 4 RE