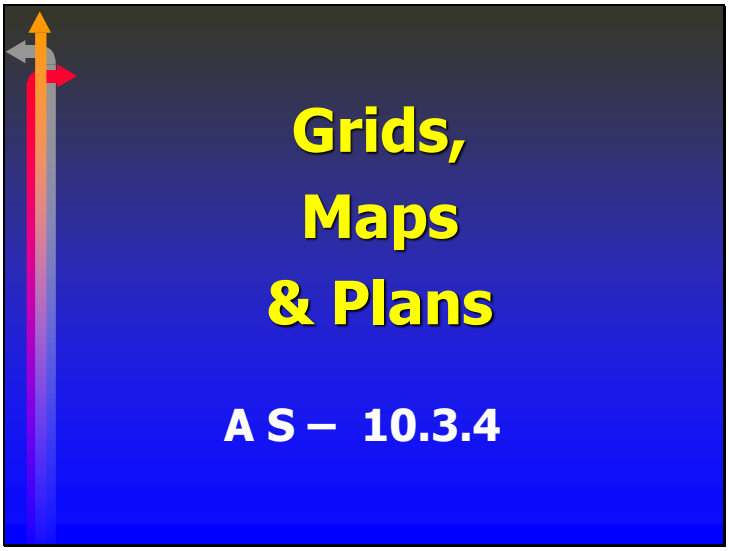
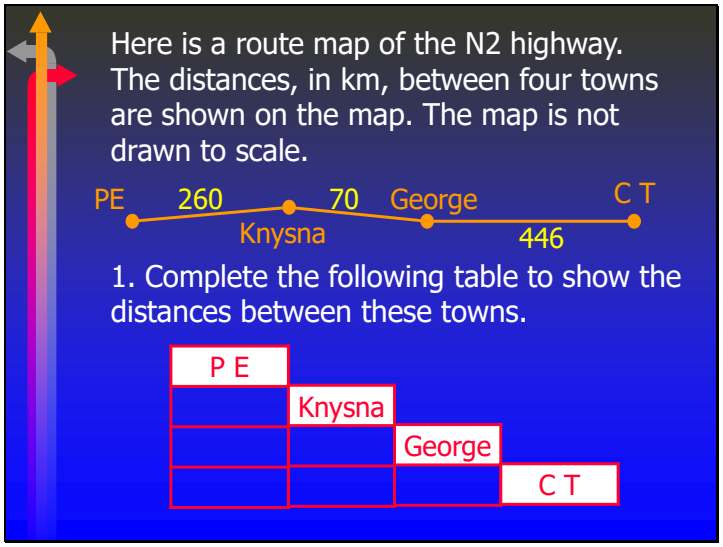
Slide 1



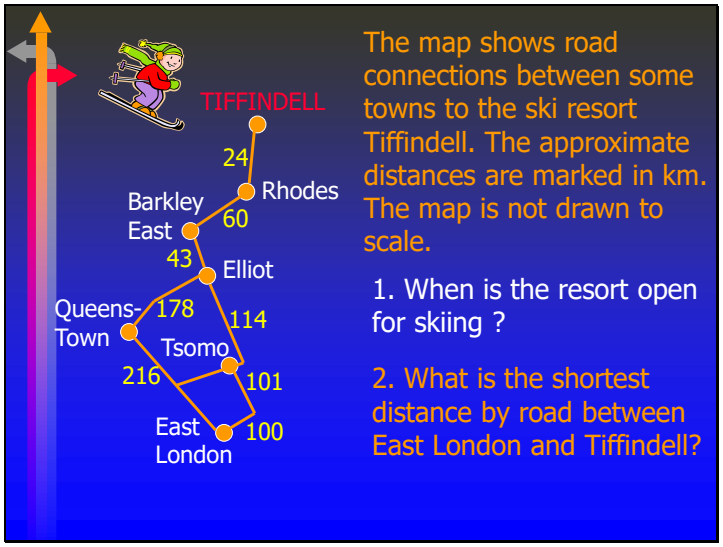
Slide 2

Where are we now?
There are many different kinds of maps e.g. a road map, a street map, a city map, bus route maps.
Maps use symbols such as scale, points and lines colours to convey information.
Road atlases usually include a distance chart, which gives distances between the main towns.
All this is useful when planning a journey.

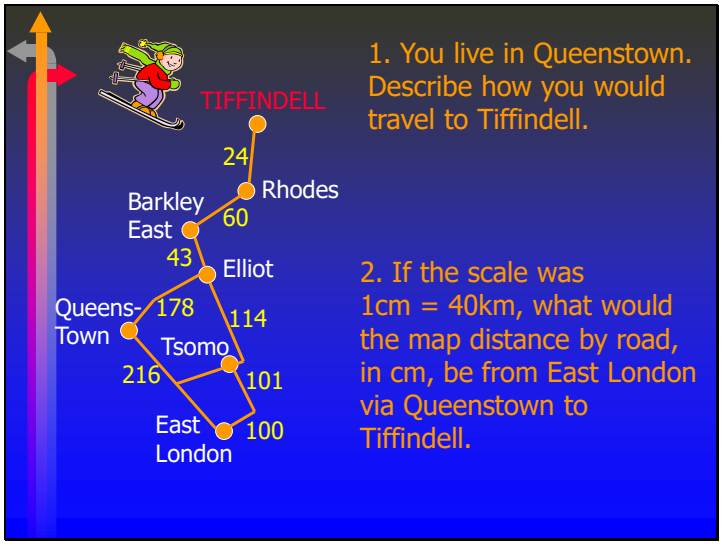
Slide 3


Here is a route map of the N2 highway. The distances, in km, between four towns are shown on the map. The map is not drawn to scale.
PE
260
Knysna
70
George
446
C T
1. Complete the following table to show the distances between these towns.
P E
Knysna
George
C T

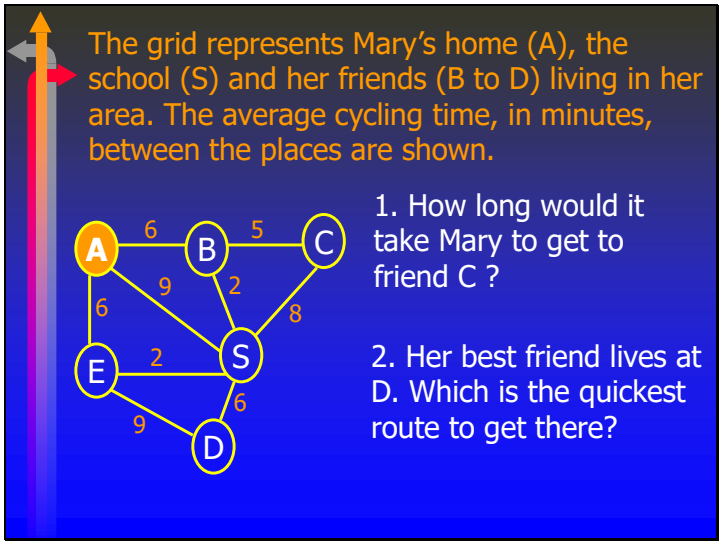
Slide 4


TIFFINDELL
24
Rhodes
Barkley East
60
43
Elliot
Queens-Town
178
114
Tsomo
216
101
East London
100
The map shows road connections between some towns to the ski resort Tiffindell. The approximate distances are marked in km. The map is not drawn to scale.
1. When is the resort open for skiing ?
2. What is the shortest distance by road between East London and Tiffindell?

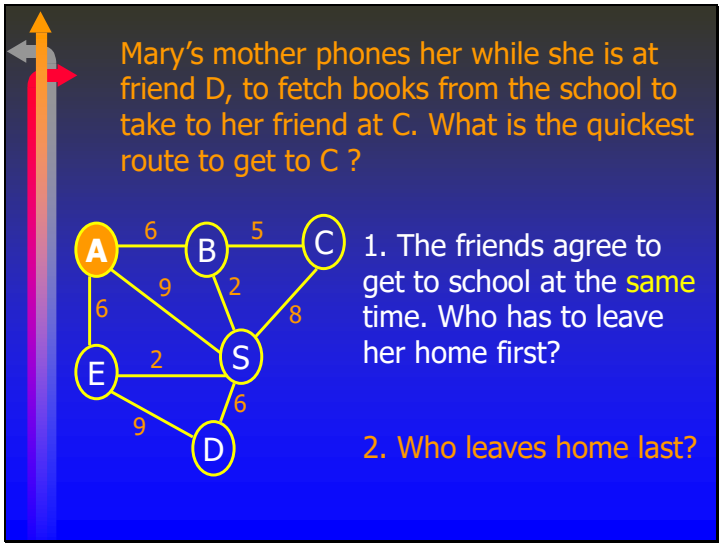
Slide 5


TIFFINDELL
24
Rhodes
Barkley East
60
43
Elliot
Queens-Town
178
114
Tsomo
216
101
East London
100
1. You live in Queenstown. Describe how you would travel to Tiffindell.
2. If the scale was 1cm = 40km, what would the map distance by road, in cm, be from East London via Queenstown to Tiffindell.

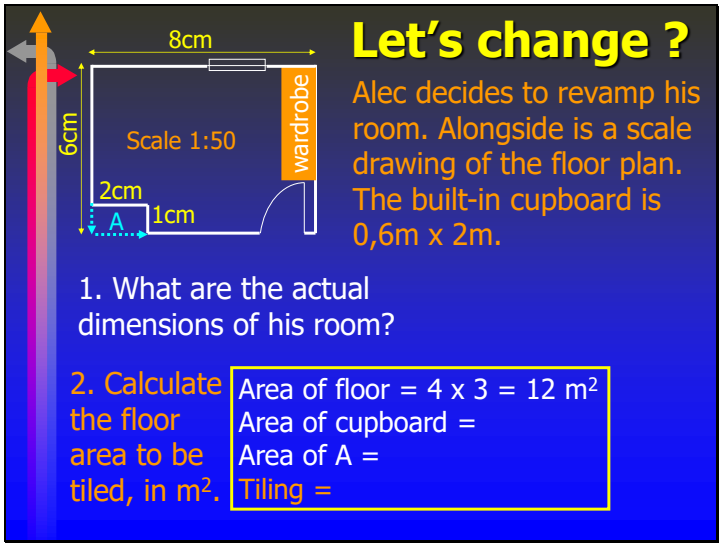
Slide 6


The grid represents Mary's home (A), the school (S) and her friends (B to D) living in her area. The average cycling time, in minutes, between the places are shown.
A
B
C
S
E
D
6
5
9
2
6
8
2
6
9
1. How long would it take Mary to get to friend C ?
2. Her best friend lives at D. Which is the quickest route to get there?

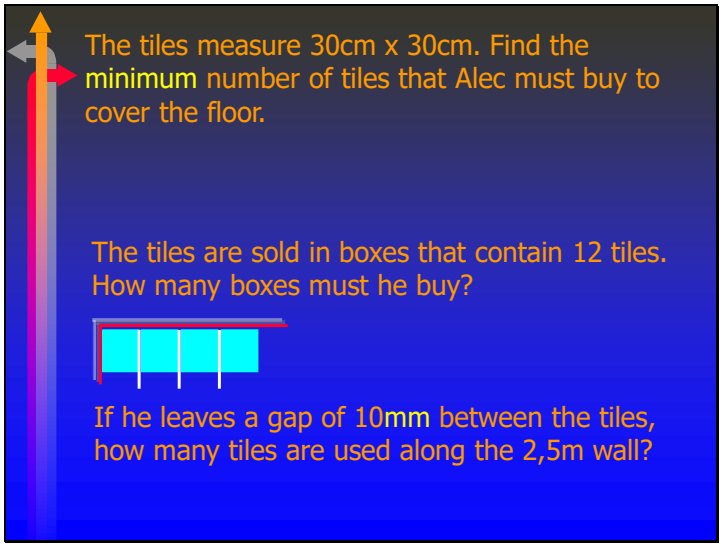
Slide 7


Mary's mother phones her while she is at friend D, to fetch books from the school to take to her friend at C. What is the quickest route to get to C ?
A
B
C
S
E
D
6
5
9
2
8
6
2
6
9
1. The friends agree to get to school at the same time. Who has to leave her home first?
2. Who leaves home last?

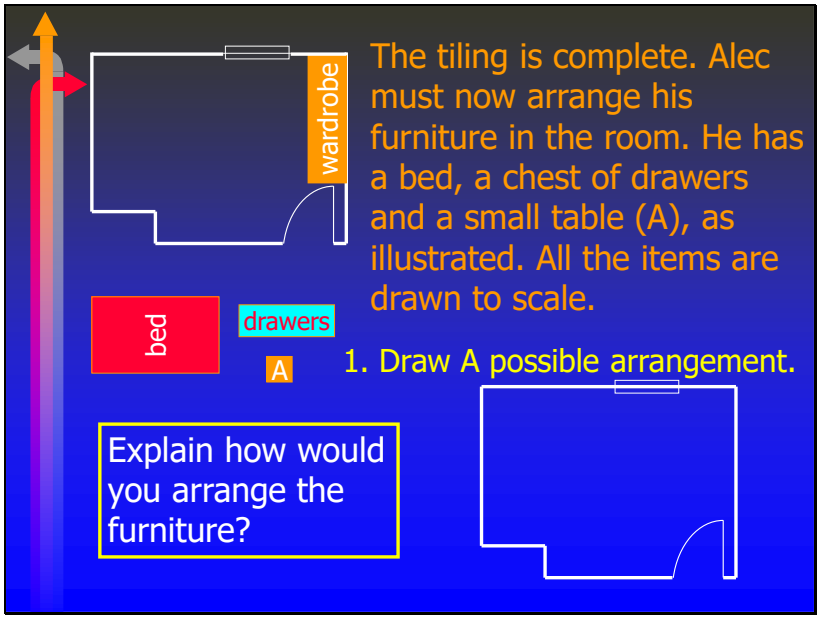
Slide 8


8cm
6cm
Scale 1:50
wardrobe
2cm
A
1cm
Let's change ?
Alec decides to revamp his room. Alongside is a scale drawing of the floor plan. The built-in cupboard is 0,6m x 2m.
1. What are the actual dimensions of his room?
2. Calculate the floor area to be tiled, in m².
Area of floor = 4 x 3 = 12 m²
Area of cupboard =
Area of A =
Tiling =

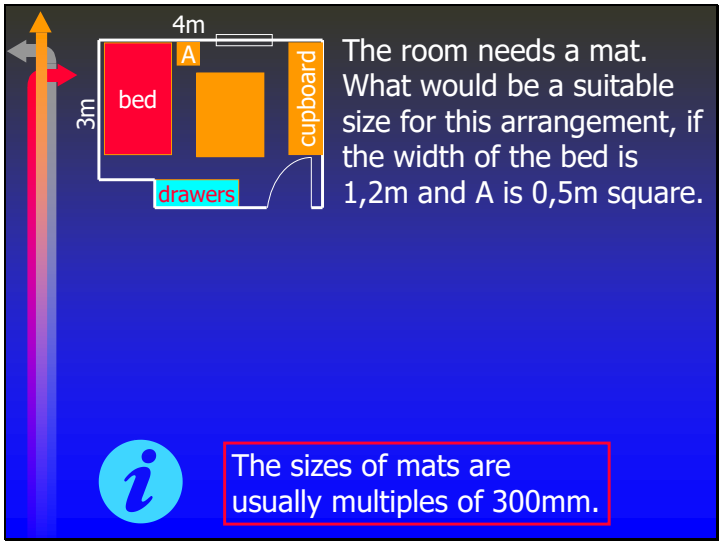
Slide 9


The tiles measure 30cm x 30cm. Find the minimum number of tiles that Alec must buy to cover the floor.
The tiles are sold in boxes that contain 12 tiles. How many boxes must he buy?
If he leaves a gap of 10mm between the tiles, how many tiles are used along the 2,5m wall?

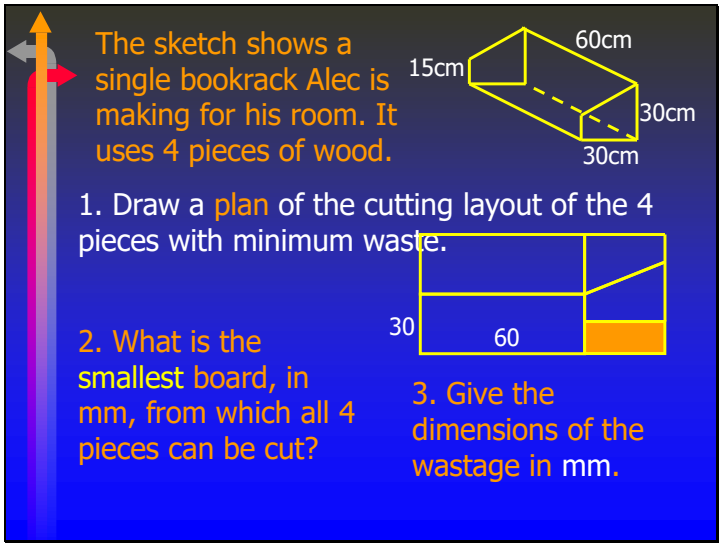
Slide 10


wardrobe
The tiling is complete. Alec must now arrange his furniture in the room. He has a bed, a chest of drawers and a small table (A), as illustrated. All the items are drawn to scale.
bed
drawers
A
1. Draw A possible arrangement.
Explain how would you arrange the furniture?

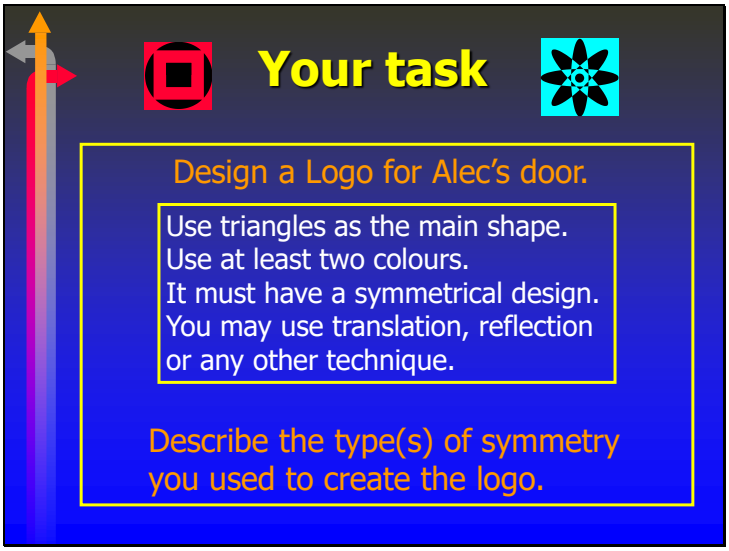
Slide 11


4m
A
bed
3m
cupboard
drawers
The room needs a mat. What would be a suitable size for this arrangement, if the width of the bed is 1,2m and A is 0,5m square.
The sizes of mats are usually multiples of 300mm.

Slide 12


The sketch shows a single bookrack Alec is making for his room. It uses 4 pieces of wood.
15cm
60cm
30cm
30cm
1. Draw a plan of the cutting layout of the 4 pieces with minimum waste.
30
60
2. What is the smallest board, in mm, from which all 4 pieces can be cut?
3. Give the dimensions of the wastage in mm.

Slide 13


Your task
Design a Logo for Alec's door.
Use triangles as the main shape.
Use at least two colours.
It must have a symmetrical design.
You may use translation, reflection
or any other technique.
Describe the type(s) of symmetry
you used to create the logo.