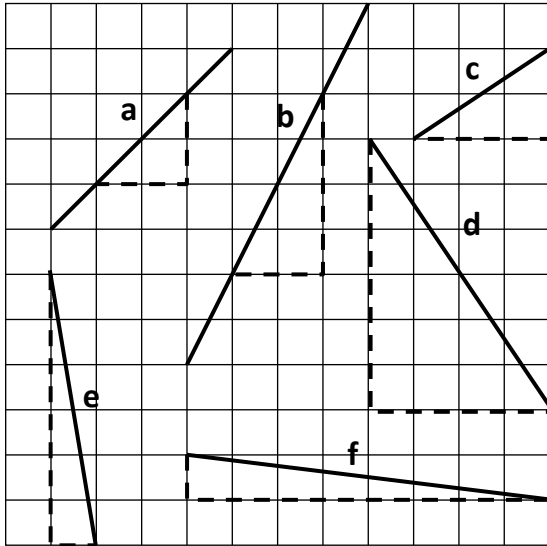
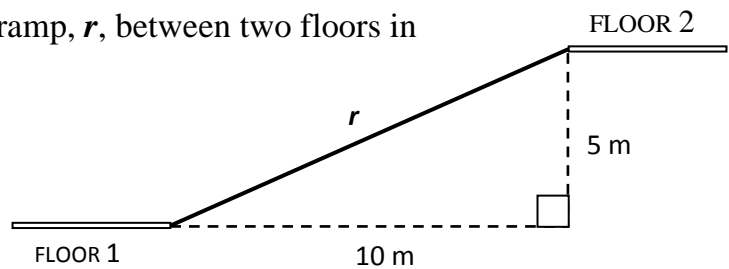


**Gradient**  
S1-S3, National 4

1. Find the **gradients** of the lines shown in the diagram below

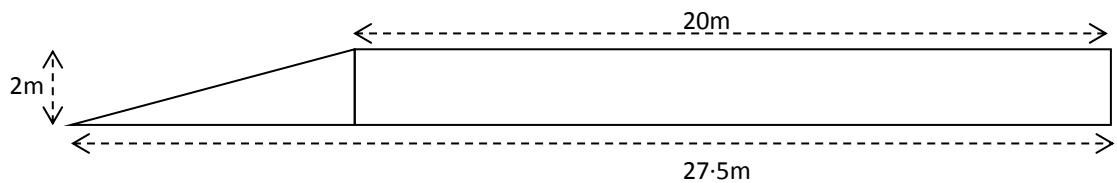


2. The diagram shows a moving ramp,  $r$ , between two floors in a shopping centre.



Find the gradient of the ramp.

3. A special stage is being built for an outdoor concert. It has to be 20 metres wide, 2 metres high and have a ramp on one side.



To be safe the gradient of the ramp should be between 0.25 and 0.3.

Is this ramp safe?

**Show all your working and give a reason for your answer.**