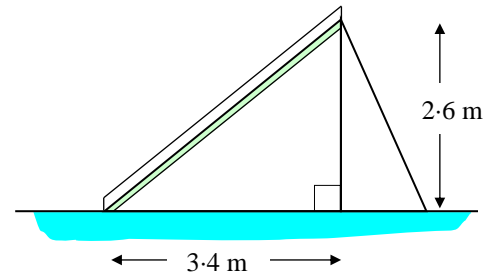


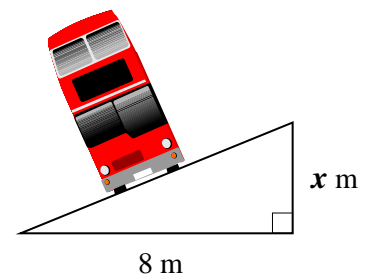
Gradients & Tolerance

1. A child's chute is deemed to be unsafe if its gradient is more than 0.8.

Is the chute shown opposite safe or unsafe for children?
You must give a reason with your answer.



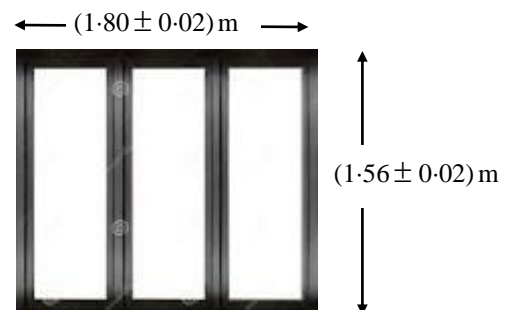
2. In order to test the stability of a bus a tilting platform is used.
 This bus will begin to topple when a gradient of 40% is reached.
 Calculate the value of x so that the bus just begins to topple.



3. The lifespan of a standard light bulb has a tolerance of (2600 ± 450) hours.
 State the minimum and maximum acceptable lifespan.

4. A window frame has dimensions as shown.

Calculate the minimum and maximum possible areas of the frame.



5. A cube has side of length (25 ± 0.5) cm.

Calculate the difference between its possible minimum and maximum volumes.

