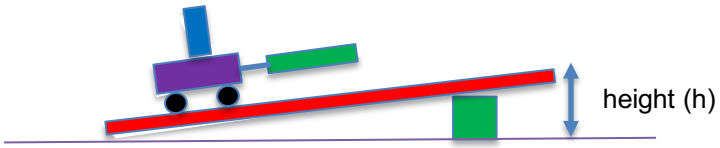
YEAR 7 SCIENCE
INVESTIGATION - INCLINED PLANE

AIM: To determine what effect an inclined plane has on lifting a load to a height.

MATERIALS:
1 x plastic car able to hold a load
4 x 50 g masses
blocks (to adjust height)
1 x 30 cm ruler
1 x 2 N spring balance
1 x 5 N spring balance
1 x board or similar surface

METHOD:

1. Set up the following.



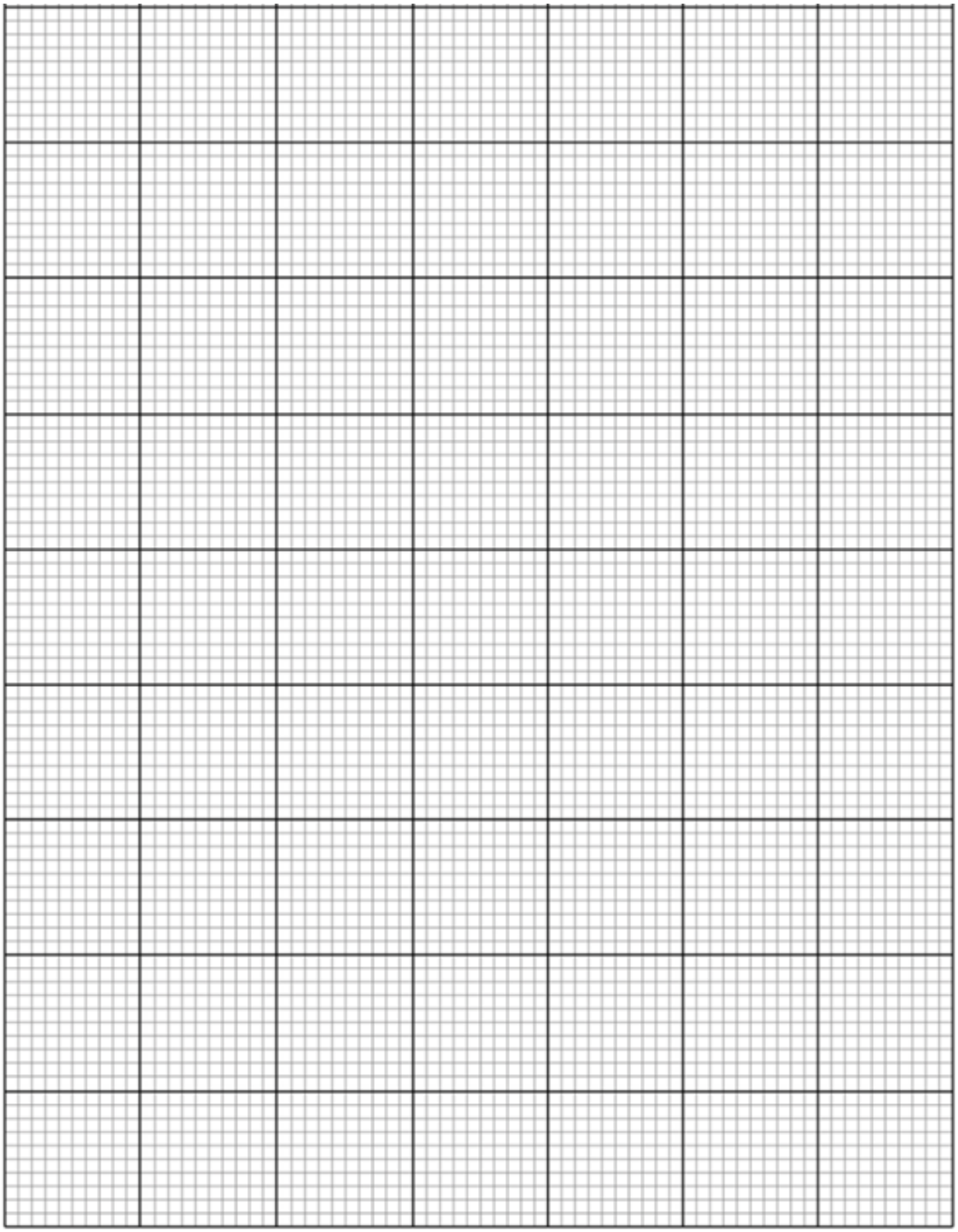
2. Measure the height (h) at the end of the ramp.
3. Load the car with 200 g and pull it smoothly up the slope. Record the force.
4. Repeat for 2 more trials and average the value of the force.
5. Adjust the end of the ramp to a bigger height and repeat 2 - 4.
6. Do at least 4 different heights - 5 would be perfect.
7. Carefully lift the car and its load with the spring balance to measure its weight in Newtons.

RESULTS:

Height of ramp (cm)	Force required (N)			
	Trial 1	Trial 2	Trial 3	Average

Weight of car and load: _____

GRAPH: Do a line graph on the next page to show your results.



CONCLUSION: How does an inclined plane change the force required to raise an object to a height?