

2.3 Investigating Friction

Aim

To investigate sliding friction of wooden blocks

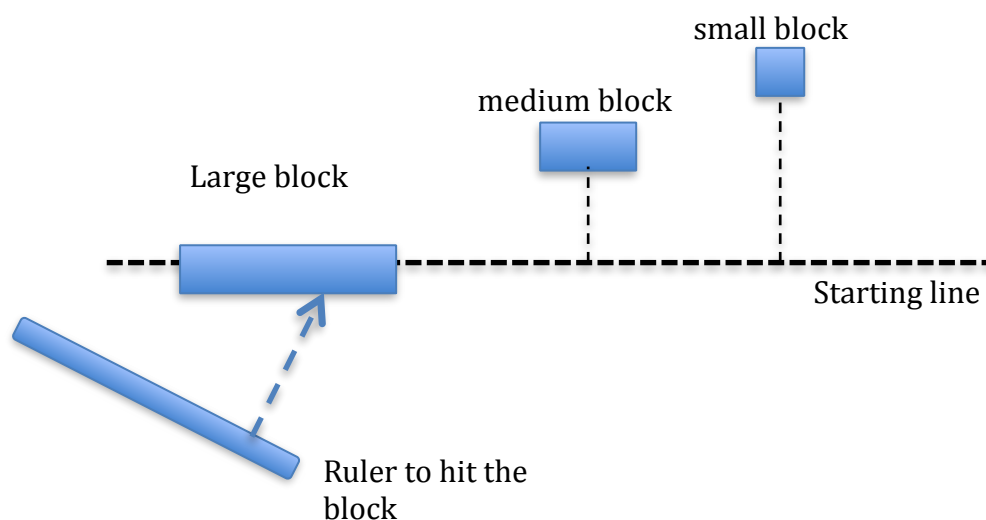
Equipment

Three different size blocks (small – about 5 cm, medium about 10cm and large about 20cm)

Two Different floor types (wood or vinyl) and (carpet or a mat)

Measuring tape

Ruler



Method

We are going to hit 3 different size blocks along the floor with one hit each. Predict which block will go the furthest. Why?

1. Floor 1 (wood or vinyl)

Put the 3 blocks beside each other, small to large about 1 meter apart.

Hitting the Small Block

Use the ruler to hit the small block on the floor.

Start this again with the same block and the same force. Did it go about the same distance? If so leave it there!

If not do it one more time and leave it there!

Hitting the Medium Block

Use the ruler to hit the medium block on the floor.

Start this again with the same block and the same force. Did it go about the same distance? If so leave it there!

Hitting the Large Block

Use the ruler to hit the medium block on the floor.

Start this again with the same block and the same force. Did it go about the same distance? If so leave it there!

Question

Was your prediction correct?

2. Floor 2 (carpet or a mat)

Repeat the above experiment on this floor.

Predict which block will go furthest.

Question 1

Was your prediction correct?

Organising your results

Put the blocks in order of smallest to largest distance they moved on these floors

Size of block and distance			
	Smallest distance	medium distance	Greatest distance
Floor 1 Wooden or vinyl floor			
Floor 2 Carpet or mat			

Analysing your results

Question 2

What blocks go further?

Compare Floor 1 to Floor 2:

Question 3

Which floor does the blocks go the most distance?

Question 4

Which floor has the greatest friction?

Question 5

Was this true for all the blocks?

Conclusion

Question 6

To push a block the most distance what do you need to do?