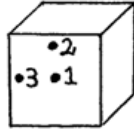


Sliding, spinning, tumbling

Di wants to see how a cube will travel when she flicks it with her pen.



Predict if the cube will tumble, slide, or spin when flicked in different spots.

- a) i) Flicked in the centre (position 1) Tumble / Slide / Spin (*circle one*)
ii) Explain your choice

- b) i) Flicked in the centre (position 2) Tumble / Slide / Spin (circle one)
ii) Explain your choice:

- c) i) Flicked in the centre (position 3) Tumble / Slide / Spin (circle one)
ii) Explain your choice:

- d) i) Which will travel further? (circle one)

- (A) A cube flicked at the centre (position 1)
- (B) A cube flicked at the left centre (position 3)
- (C) Both will travel about the same distance

- ii) Explain your choice about which cube will travel furthest.

Plan

e) What things must be done to conduct a fair test to decide whether a cube goes further spinning or sliding?

Data - Conduct an experiment

Test your predictions to c) by conducting an experiment.

The teacher will demonstrate how to do this and how to record your data on your recording strip.

f) i) Flick the cube in the centre (position 1). Mark the distance it goes on the upper line of your recording strip. Repeat this 20 times.



ii) Flick the cube in the left centre (position 3). Mark the distance it goes on the lower line of your recording strip. Repeat this 20 times.



Interpret your graphs

g) Compare the results on the two recording strips to make a conclusion about whether the cube goes further when it is sliding, or when it is spinning.

i) Circle the response that best fits in this sentence:

My graph shows that a cube that is hit in position 1 usually travels _____ than a cube hit in position 3.

further than / about the same distance as / not as far as (*circle one*)

ii) Explain how you used the graphs to give you your answer to part i) above.

Pose other questions about flicking the cube

h) What other things could you test by flicking your cube?
