

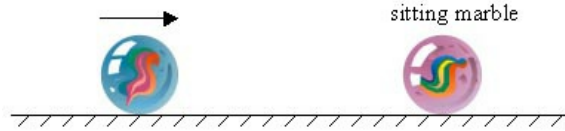
# Colliding marbles

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**This task is about the transfer of energy.**

a) Use the two large marbles to do the following.

Roll one of the large marbles into the other large marble which is sitting still (see diagram).



Draw a diagram similar to the one above to show what happens.

b) i) Now roll a **smaller** marble into a **larger** marble which is sitting still.  
Either draw a diagram or describe what happens.

ii) Now roll a **larger** marble into a **smaller** marble which is sitting still.  
Either draw a diagram or describe what happens.

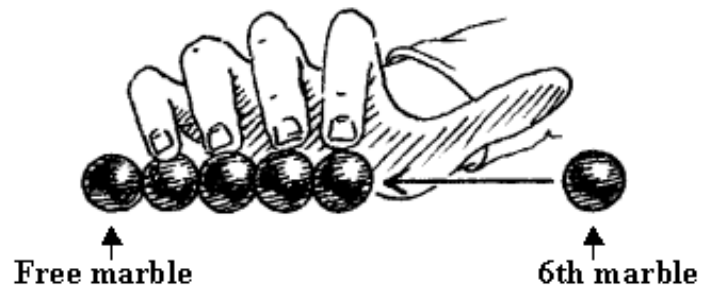
iii) Write a general summary sentence to show what you have found out.

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### c) Investigate

On a flat surface (or in the fold of the newspaper) put 5 marbles close to each other. Hold 4 marbles together in a line with your fingers, leave one marble free on the end. Roll the sixth marble to hit the first marble held by your fingers. Try this a few times.



i) Describe what happens to the free marble on the end of the line.

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ii) Explain what happens to the energy of the sixth marble as it hit the others.

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