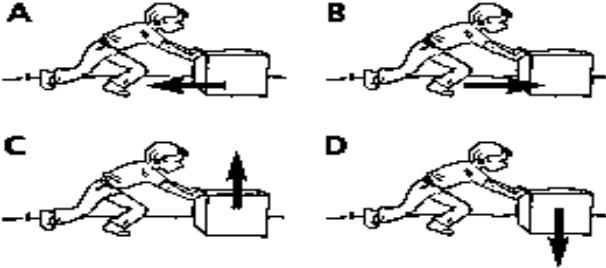




Q1) Circle the correct letter for each question

1 Rachel is pushing a box.

Which drawing shows Rachel's pushing force?



2 Which material can you pick up with a magnet?

- A plastic
- B wood
- C iron
- D glass

3 You can use a magnet to help you to sort things for recycling.



Which materials can you sort with a magnet?

- A aluminium from iron cans
- B aluminium cans from glass bottles
- C paper from cardboard
- D food wrappers from newspapers

1) Why do some chairs have springs inside?

- A) To make them comfortable to sit on.
- B) To make them uncomfortable to sit on.

2) Complete this sentence.

A spring pushes back...

- A) When it is compressed.
- B) When it is stretched.

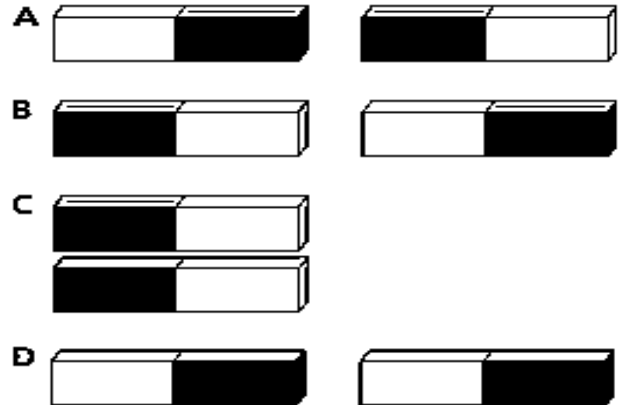
3) Jane is pulling on a spring. The spring will pull back.

Which picture shows when the spring will be pulling back the hardest?

1 What does 'repel' mean?

- A pull towards
- B push away
- C turn around
- D run away

2 Which set of magnets will attract each other?



3 Complete this sentence.

You can tell a piece of metal is a magnet if...

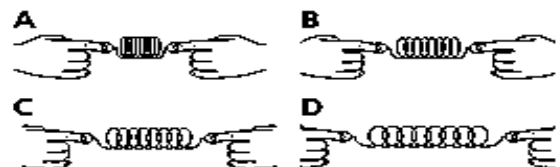
- A it will repel a magnet.
- B it will attract a magnet.
- C it will attract a piece of aluminium.
- D it is painted in two different colours.

C) Because springs are magnetic.

D) To make the seat hard.

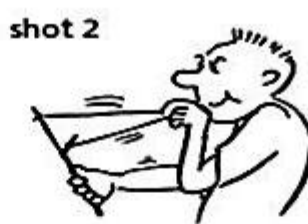
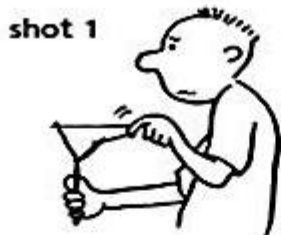
C) when it is twisted

D) all the time



Q2) David is using a catapult to shoot a stone.

He pulled the elastic a different amount each time to see which shot would go the furthest.

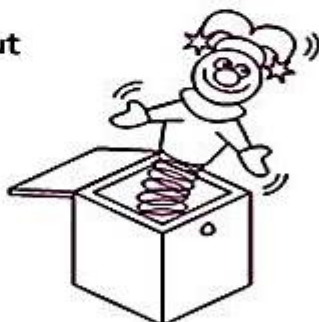
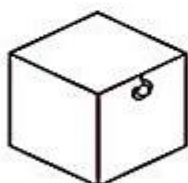


a Which shot will go the furthest? _____

b Why will this shot go the furthest? _____

c Describe one thing that David must do to make his test fair.

Q4) This is a 'jack-in-the-box'. It springs out when you open the lid.



Sarah is trying to push it back into its box.

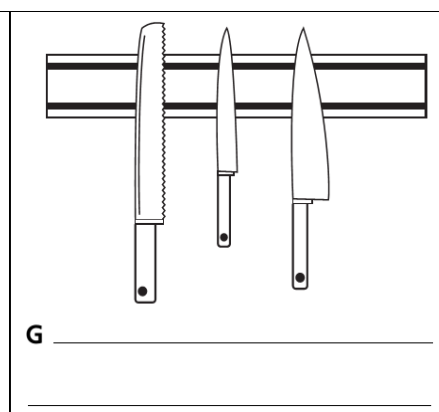
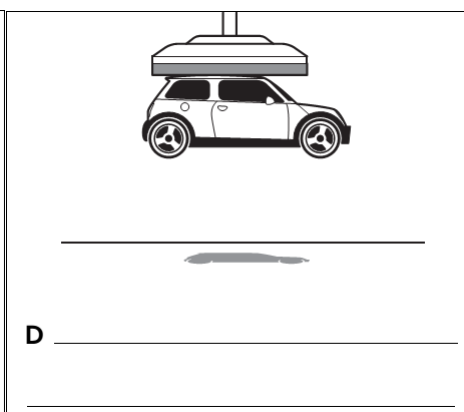
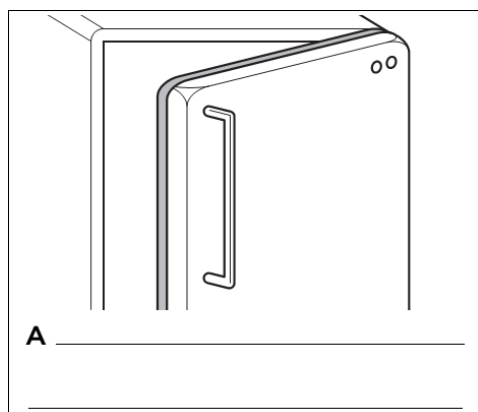
a What does she have to do to the spring to make the toy go back in the box? Tick *one* box.

- stretch it
 pull it
 push it
 twist it
 [1 mark]

b Sarah pushes down on the toy's head. What does her hand feel?



Q5) Explain what these magnets are being used for.



Q6) Sam is sitting on chair which has springs inside. He is pushing on the springs.

a Draw an arrow on the diagram to show how Sam is pushing on the springs. Label this arrow 'Sam'.

b Draw another arrow to show how the springs are pushing back. Label this arrow 'springs'.

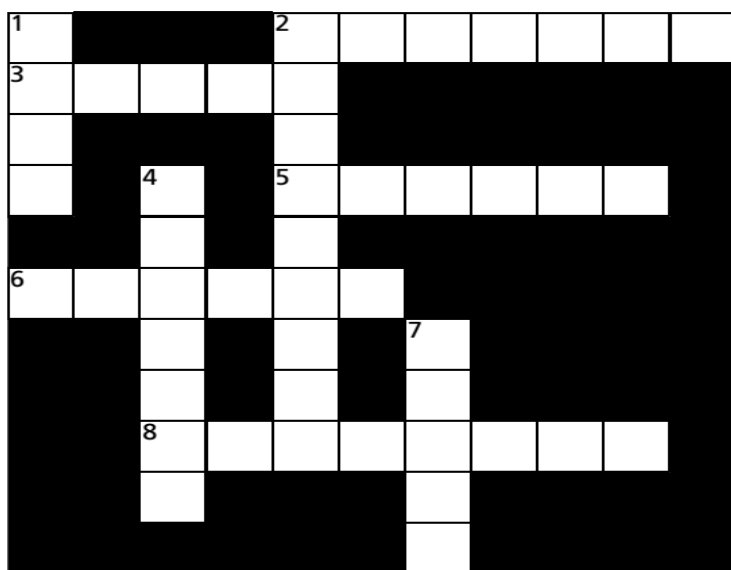
c Sam's dad sits on the chair. What will happen to the springs?

The springs will _____

because _____



Q7) Use the clues to complete the crossword.



Across

- 2 What a magnet does to a piece of iron.
- 3 A word for 'push away'.
- 5 A piece of metal which attracts magnetic materials.
- 6 A coil of metal used in mattresses.
- 8 A scientific word for 'squash'.

Down

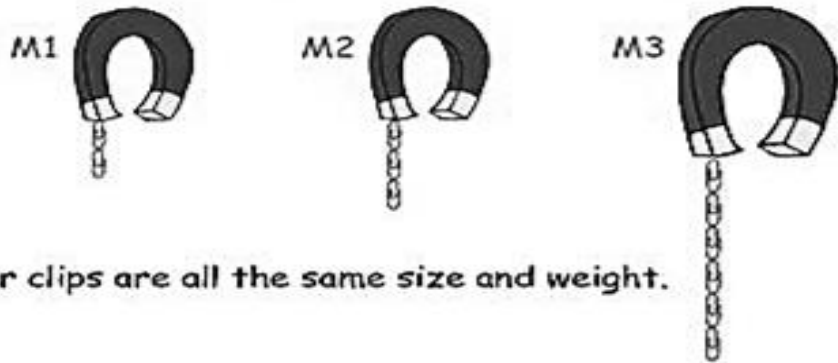
- 1 A material that is attracted to magnets.
- 2 A metal that is not attracted to magnets.
- 4 If you do this to a spring, it will pull back.
- 7 A push or a pull.

Q8) Look at these 3 springs below. Why is spring 2 the longest? Give your reasons below:



Describe what happens to a the spring in a Jack in the Box when the lid is closed:

Q9) Magnets come in all shapes, sizes and strengths.



paper clips are all the same size and weight.

Look at the 3 magnets above. M1 and M2 are the same size. The magnets show how many paper clips they can hold.

- 1) Are magnets M1 and M2 the same strengths? _____
- 2) Which magnet M1 or M2 is the strongest? _____
- 3a) If we are testing the strength of a magnet do all the paper clips have to be the same size? _____
- b) Why? _____

- 4) Which of the 3 magnets is the strongest? _____

Q3. Write whether each set of magnets will attract or repel.

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