What Are Pushes and Pulls?

Each of the actions in the box below is a push, a pull, or both! Write each letter in the correct space in the Venn diagram. The first one has been done for you.

**Actions**

A. Dragging a chair  
B. Rowing a boat  
C. Pressing a lift button  
D. Typing on a computer keyboard  
E. Sweeping the floor  
F. Combing your hair

---

*Push*  
*Pull*  

A
What Is a Force?

Rita rolls a ball along the ground. An ‘X’ is drawn at the position where the ball stops.

a. If Rita rolls the ball with more force, where would the ball stop?

b. Tom is now standing at position ‘X’. He wants to roll the ball towards Rita. Should Tom exert a force to the left or to the right as shown in the picture?
What Are the Effects of Forces?

Below are some statements about the effects of forces. Write ‘True’ or ‘False’ in the box beside each statement.

<table>
<thead>
<tr>
<th>Statements</th>
<th>True/False</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Forces can be seen.</td>
<td></td>
</tr>
<tr>
<td>ii. The effects of a force can be seen and felt.</td>
<td></td>
</tr>
<tr>
<td>iii. A push is a force that brings an object nearer to us.</td>
<td></td>
</tr>
<tr>
<td>iv. To move an object, a force must be applied.</td>
<td></td>
</tr>
<tr>
<td>v. A force can change an object’s speed.</td>
<td></td>
</tr>
<tr>
<td>vi. A force cannot change an object’s size.</td>
<td></td>
</tr>
</tbody>
</table>
Look at the picture below and observe what Smarty, Min, Ari, Rita and Tom are doing.

a. Circle in blue those applying only a pushing force.

b. Circle in red those applying only a pulling force.

c. Circle in green those applying both a pushing and pulling force.
Exam Practice

**Process skills:** Observing, Analysing, Inferring

Tom and Ari have two similar plasticine balls. Tom is trying to stretch his plasticine ball, while Ari is trying to flatten his.

![Tom's plasticine ball](image1.png)  ![Ari's plasticine ball](image2.png)

a. In the pictures above, draw arrows to show the direction of the forces exerted by Tom and Ari. [2 marks]

b. What types of force are Tom and Ari using?

Tom: ____________  [1 mark]

Ari: ____________  [1 mark]

c. What can we conclude from this activity about the effect of forces? [2 marks]

______________________________

______________________________

**Hint:**
What change have the forces caused to the plasticine balls?
**Pushes and Pulls**

**Consolidation Worksheet 1**

What Are Pushes and Pulls?

Each of the actions in the box below is a push, a pull, or both! Write each letter in the correct space in the Venn diagram. The first one has been done for you.

**Actions**

- A. Dragging a chair
- B. Rowing a boat
- C. Pressing a lift button
- D. Typing on a computer keyboard
- E. Sweeping the floor
- F. Combing your hair

**Consolidation Worksheet 2**

What Is a Force?

Rita rolls a ball along the ground. An ‘X’ is drawn at the position where the ball stops.

a. If Rita rolls the ball with more force, where would the ball stop?
   - The ball would stop after the ‘X’ / on the right of the ‘X’.

b. Tom is now standing at position ‘X’. He wants to roll the ball towards Rita. Should Tom exert a force to the left or to the right as shown in the picture?
   - Tom should exert a force to the left.
Consolidation Worksheet

What Are the Effects of Forces?

Below are some statements about the effects of forces. Write ‘True’ or ‘False’ in the box beside each statement.

<table>
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</tr>
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</table>

Fun and Games

Circle Me Out!

Look at the picture below and observe what Smarty, Min, Ari, Rita and Tom are doing.

a. Circle in blue those applying only a pushing force. (Rita and Min should be circled in blue.)
b. Circle in red those applying only a pulling force. (Smarty and Ari should be circled in red.)
c. Circle in green those applying both a pushing and pulling force. (Tom should be circled in green.)
**Exam Practice**

**Process skills:** Observing, Analysing, Inferring

Tom and Ari have two similar plasticine balls. Tom is trying to stretch his plasticine ball, while Ari is trying to flatten his.

![Tom's plasticine ball and Ari's plasticine ball]

**a.** In the pictures above, draw arrows to show the direction of the forces exerted by Tom and Ari.  [2 marks]

**b.** What types of force are Tom and Ari using?

Tom: __Pull__  [1 mark]

Ari: __Push__  [1 mark]

**c.** What can we conclude from this activity about the effect of forces?  [2 marks]

*Hint:* What change have the forces caused to the plasticine balls?

Forces can change the shape of an object.
Chapter 6: Pushes and Pulls

Direction: The path on which something is moving
Forcemeter: An instrument used to measure force
Newton: The unit of force
Speed: The rate at which something moves
Stationary: Not moving